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ABSTRACT

This study investigated: (1) the use of financial incentives as a method of initiating and maintaining the day care mother's involvement in a parent education program; and (2) the influence of financial incentives on the quality of mother-child interaction and the child's self concept. The Parents Are Teachers Too Program (PTT) was offered for 12 weekly sessions at six day care centers in different Michigan cities. Three incentive conditions were operating: Incentive 1 paid a $5 stipend to each mother for each meeting attended; Incentive 2 provided babysitting and transportation for each meeting attended; and Incentive 3 provided no incentive other than the program itself. The principal dependent measure was maternal attendance at PTT sessions. Child self-esteem and the quality of mother-child interaction were also measured. Results indicated that (1) There was significantly more attendance in incentive conditions 1 and 2; (2) incentive 1 initiated and maintained more attendance than Incentive 2; (3) there was significant positive change in child self concept in all conditions; (4) Children evidenced greater positive change in self concept in Incentive 3; and (5) No significant changes on mother-child interaction measures were evidenced based on incentives or attendance. (Author/SDH)

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COLLEGE OF HUMAN ECOLOGY

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**MATERNAL INVOLVEMENT IN DAY CARE:
A COMPARISON OF INCENTIVES**

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Abstract

MATERNAL INVOLVEMENT IN DAY CARE:
A COMPARISON OF INCENTIVES

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The Parents Are Teachers Too Program (PTT) was offered at six day care centers in different cities under three incentive conditions: Incentive 1, $5 stipend for each meeting attended; Incentive 2, babysitting and transportation for each meeting attended; Incentive 3, no additional incentive other than the program itself. Each program consisted of 12 weekly two-hour sessions implemented by the Day Care Center Staff.

The major goals of the study were: (1) to determine if the use of financial incentives is an effective method of initiating and maintaining the day care mother's involvement in a parent education program (PTT); and (2) to determine if the use of financial incentives influences the quality of mother-child interaction and the child's self-concept.

The principal dependent measure was maternal attendance at PTT sessions analyzed in a 3 x 2 nested design through multivariate analysis of variance. The secondary measures were child self-esteem as measured by the Brown IDS Self Concept Referents Test and quality of mother-child interaction as assessed by the Hess and Shipman Toy Sort Task. The analyses of these variables utilized a 3 x 2 nested design with a multivariate analysis of covariance.

Results:

(1) There was significantly more attendance in the financial incentive conditions (Incentive 1 and 2) than in the no incentive condition (Incentive 3).

(2) More attendance was initiated as well as maintained by the $5 incentive over the babysitting and transportation incentive, and by the babysitting and transportation incentive over the no incentive condition.

(3) There was significant positive change in child self-concept for the children whose mothers attended the PTT Program in all conditions.

(4) Children in centers assigned no financial incentives evidenced greater positive change in self-concept than children in centers assigned financial incentives.

(5) No significant changes on mother-child interaction measures were evidenced based on incentives or on attendance.

PREFACE AND ACKNOWLEDGMENTS

This is the final report of a project begun in 1972 designed to analyze the effect of financial incentives on the attendance of mothers at parent education programs at day care centers. The research was supported by the Children's Bureau, Office of Child Development Grant #OCD-CB-243. It was begun in response to the obvious need to facilitate the interaction between parent and day care center and between parent and child. Many people participated in various stages of the project. We would like to acknowledge their essential roles in the study. Anne Stevenson was involved in the initial development of the project.

Research assistants Carolann Brown and Tito Reyes trained and supervised the day care center personnel in presenting the Parents are Teachers Too (PTT) program. Judy Herrbach assisted them in the preparation of materials for the mothers. Research assistants Paul Huhs and Kenneth Sperber had the principal responsibility for testing the children and mothers. They were assisted by Pixie Vose, Sue Berger, Debbie Hubbell and Carole Cummings.

The Data Unit of the College of Human Ecology gave extensive assistance in the preparation, analysis and interpretation of data. Jo Lynn Cunningham, assistant director of the Institute for Family and Child Study during 1972-73 and research assistants Verda Scheifley and Judy Pfaff guided the project in its initial data reduction phase.

Those who worked on processing raw data and coding included Sally Trapp, Debbie Norman and Dorothy Nichols. Gayle Svanbeck

keypunched the data and aided in the artistic development of the lessons. Alice Lucas and Cynthia Zinn along with the entire staff of the Institute for Family and Child Study provided numerous clerical and support functions.

We would also like to extend our sincere appreciation to the families who participated in the study, as well as the day care center teachers and their support staff. Without their able contributions and support the project could not have proceeded.

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CHAPTER I

INTRODUCTION

The current emphasis on quality day care planning involves a commitment to meeting the developmental needs of the child. One of these basic needs for positive development is a warm and responsive relationship between the mother and the child. When a child is taken from home (or remains at home without loving care from someone he trusts), research suggests he may develop mental and emotional problems which affect his learning, motivation, and behavior. John Bowlby reports that in the Western world the commonest disturbances of attachment are the results of too little mothering coming from a succession of different people (Bowlby, 1969). Similarly, L. J. Yarrow reports that "besides the retardation of development caused through emotional factors, maturation in adjustment is markedly slowed by deprivation of sensory, social and affective stimulation when a child cannot be with his mother" (Yarrow, 1964; p. 127).

Juxtaposed against these developmental problems of the child are the current economic realities of families in the United States. Keyserling states that "in three and three-quarter million families with two parents and preschool children, the mothers are in the labor force. About 40% of these families would have incomes of less than $7,000 a year without the mothers' earnings....About 650,000 employed mothers of children under the age of six are widowed, separated, or divorced. Their earnings are essential to the maintenance of their families, and spell the difference between independence and welfare assistance" (Keyserling, 1973; p. 4).

In response to the evident need of families, especially those in which the mother must work, the OCD - OEO Day Care Workshop of 1970 supported a reciprocal relationship between the day care program and the family. In 1972 the American Orthopsychiatric Study Group on Mental Health Aspects of Day Care charged that day care services organized to contribute to mental health must consider models for interrelating family and day care based on the concept of an extended family and implemented by support of family resources. Indeed, the developmental approach advocated strengthens the parent's role rather than shifting the responsibility to society.

Federally licensed day care centers must, as a requirement, provide for some mode of parent participation. In practice, many centers have difficulty doing this, perhaps due to the unconscious "unlinking" mechanism, well documented in Caplan (1961), which may take place as the mother deposits her child - and delegates her responsibilities - at the center.

The day care center serving working mothers, then, may find it has a mandate to complement the family, but that parents are busy and tired and frequently uninterested in collaboration with the center, even for the good of their children. This research addresses itself to this problem.

Purpose of the Study

The study had two major goals. The first was to examine the effect of financial incentives on the amount of the day care mother's involvement in an organized parent program. The second was to examine changes in the quality of mother-child interaction and self-esteem of

the children over the period of the incentive-motivated parent program.

Objectives

The specific objectives were:

a. to determine if the use of financial incentives is an effective method of initiating and maintaining the day care mother's involvement in a parent-education program.

b. to determine if the use of financial incentives influences the quality of mother-child interaction and the child's self-concept.

Incentives

Financial incentives in the form of services as well as direct monetary remuneration were deemed appropriate. The incentive labeled "Incentive 1" was the provision of five dollars to mothers for each meeting attended. This was intended to cover the costs of babysitting and transportation which she incurred. The second incentive, "Incentive 2," was to offer transportation to and from the meeting to all mothers and their children and babysitting at the time of the meeting at the center facility. The third condition, interpreted as a control, involved no financial incentive for attendance at the parent program. Two centers were randomly assigned to each incentive condition.

Parents Are Teachers Too

The "Parents Are Teachers Too" (PTT) curriculum (1969, 1971) used in this project is a developmental curriculum module for increasing positive parent-child, parent-teacher, and parent-school interaction (see Appendix B for description and sample lesson). It was developed by Judith Kuipers and Robert P. Boger in 1968-69 and successfully field-tested with an ongoing Head Start Program in Michigan. To serve the needs of this research the curriculum was slightly adapted for use with day care centers.

The PTT curriculum is a most appropriate form of parent participation for use in day care centers. The primary aim and appeal of these lessons is their provision for the mother of a vehicle for positive interactions with her child. She learns specific techniques to extend the educational content of her child's daily activity. The child's teacher provides the information for the mother in a carefully designed process emphasizing teacher-mother collegiality. The lessons are designed to enhance the language and perceptual-motor skills of the child at the child centers. Following the sessions with the teacher the parent teaches her child the lesson at home with the help of appropriate, inexpensive aids she has constructed as a part of the parent education meetings.

Summary

This research compares the effects of providing a parent education program (in this case the PTT) at urban day care centers with and without supplementary financial incentives. One incentive involved the provision

of a five-dollar stipend per parent meeting attended; a second provided the opportunity for babysitting and transportation for each meeting attended; the control condition involved the program with no financial incentive. Six day care centers from six southern Michigan communities were involved and were randomly assigned to the three incentive groups.

CHAPTER II

REVIEW OF THE LITERATURE

Current research underscores the critical importance of parent involvement in early childhood programs. The rationale behind this emphasis is based on both empirical and theoretical support (e.g., Boger, Kuipers and Beery, 1969; Gordon, 1969; Gordon, 1972; Levenstein, 1971; Weikart and Lambie, 1969).

In reference to day care programs Bronfenbrenner states:

> The purpose (of day care) is not just to free the parents for other activity or to serve manpower requirements. Since so many of the experiences that are critical for a child's development involve his parents, the primary focus of any effective day care program must be the individual child and his family (Bronfenbrenner et al., 1970).

The difficulty, however, comes in putting this rhetoric into operation. Currently, the motivating force behind child care would appear to be more concerned with meeting the needs of the mother than those of the child. Despite great interest in and need for parental involvement in day care, the majority of programs have had neither the financial nor the human resources required to ensure parent participation. Emphasis has been on appealing for parent participation in a variety of ways with sporadic success i.e., Head Start, Title I projects.

It is readily agreed that the day care center should provide a program that meets the developmental needs of young children. The amount and quality of mother-child interaction are the most critical needs the child experiences (Bloom, 1964; Kagan and Moss, 1962; Olmsted & Jester, 1972; Schaefer, 1970; White, 1972.) Day care programs, therefore,

reinforcement were provided for the mothers. Home visits provided the professional help in meeting the needs of both the infant and the mother as well as corrective feedback on the principles of teaching presented in the meetings. Subjective evaluation of the first year's results suggest these programs aid in fostering dignity and positive self-concept in the mother involved and can be an effective method of preventing learning deficits in children.

The Parents Are Teachers Too Program (PTT) was first field-tested in 1969 in a rural Northern Michigan School district (Boger, Kuipers & Beery, 1969). The purpose of the study was to determine the effectivness of a parent-as-change-agent model in an ongoing experimental Head Start Program. The program involved a home language-intervention program in which mothers worked with Head Start children using curriculum materials developed in teacher-directed workshops. The study incorporated a pre- and posttesting design to ascertain the effects of the short-term parent training as reflected in linguistic, intellectual, and self-concept performance of the children. Results supported the following conclusions:

1. Children whose parents participate in language training programs, specifically designed to help them increase interactions with their children in the home, increase in language skills.
2. Children whose mothers interact with them both personally and specifically develop a more positive self-perception as well as a more positive perception of their mother's view of them than Head Start children without such supplements.

3. Mothers who participate in a specific language training program increase their own verbal and linguistic skills and generally improve the learning quality of their interactions with their children as a function of such training effort.
4. Children whose mothers participate in a specific parent-education program such as language training perform better on general intellectual tasks than children whose mothers participate in a general workshop or no treatment.

Gordon (1968) reports the effective use of paraprofessionals in training mothers and infants in the home. Two controls--a group receiving visits without training procedures and a group receiving no visits or training--were implemented with infants from three months to one year in age. Results of tests at the age of one indicated that infants in the experimental group excelled infants in both control groups on tasks from the training series as well as relevant dimensions of a developmental scale. The placebo and pure control groups did not differ significantly from each other on these tests. Since this time the Florida Program has increased activity around five levels of parent involvement: (1) audience, bystander observer, (2) teacher of the child, (3) volunteer, (4) trained worker, and (5) participants in decision making, especially through advisory board membership (Gordon, 1970, pp. 27-28).

Dunham (1968) in Project Know-How at Florida State University involved mothers as assistants in a class program using a center for preschool training for ages one to six. The mothers are employed at

the center and the focus of their training is on "homemaking skills" which provide more attention and stimulation for their children.

Leler (1967) has implemented an enriched preschool curriculum for socially disadvantaged children and involved parents in a weekly participation-education program to determine whether the child's language and intellectual skills are improved over children only minimally involved.

Schaefer's (1965) tutorial studies involved children from fifteen months to three years in a daily home visitation program in which college students were trained to emphasize verbal stimulation of the child. These results indicate that tutoring does make a significant difference in early verbal development in spite of repeated observations of extreme deprivation in the homes.

The work at the DARCEE Center at Peabody College is one of the more extensive current parent programs. Three treatment groups involving only four-year-olds were included in this project. Maximum inpact includes both mother and child in a preschool program. A curriculum group includes the more traditional child-only program. A third group is a home visitor program in which mother and child are trained, with the mother participating in a follow-up during the week. DARCEE programs include in-service training for participating mothers, training methods for more effective motherhood, as well as training in classroom responsibilities. Results indicate that mothers can be trained, that the training enhances their self-concept and their ability to mobilize themselves to make changes in family life. In addition there is considerable evidence of

diffusion--both to siblings and to friends and neighbors (including the control groups!). These results indicate that, assisted by effective training and a good role model in the teacher, the mothers are more eager to assume an active role in their children's development.

Karnes (1968) working with socially disadvantaged mothers and children, investigated the effects of a short-term training program for mothers as reflected in the intellectual and linguistic development of their children. Fifteen pairs of disadvantaged preschool children were matched on appropriate variables. Neither experimental nor control subjects were enrolled in a preschool, nor were control mothers enrolled in a training program. During a weekly two-hour period, mothers of the experimental children made instructional materials and learned methods for using them with their children in the home. Children of mothers involved in the training program manifested significantly greater gains than the control children on measured intelligence and language skills.

Loveless and Kelly (1968), in conjunction with the University of Hawaii Head Start Evaluation and Research Center, have developed a highly structured sequential language curriculum for the preschool child. Doris Crowell directs a parent program concurrently. Parents are presented with the structured materials and techniques to foster the child's language development in the home.

Both Weikart and Levenstein are involved with programs in which professionals have visited homes to train the mother in child stimulation with four-year-old children. Results indicate that mothers can be aided in this role.

In a recent article Levenstein reports the replication of the Mother-Child Home Program in four eastern cities with low-income families. Cognitive gains were attained by the children participating in this "mother-involved" program commensurate with gains obtained in the early laboratory studies. At the end of the one-year replication program, thirty seven preschoolers in four replication programs were found to have made a combined mean general I.Q. gain of 16.3 points (posttest I.Q., 106.0) and a verbal I.Q. gain of 10.3 points. This compares to the model program gains of 17.5 points. The lack of appreciable differences provided confirmation of the Model Program's effectiveness (Levenstein, 1973).

Concerns which are emphasized repeatedly in these reports include the child behaviors that mothers reward or do not reward. It is clear some children were most often rewarded for passivity and received little positive reinforcement for language and assertive behavior. The parent programs, then, encouraged the mother to function with positive reinforcement of verbal behavior and with interaction which adds information, encourages reflection and a variety of responses through request and response. These are emphasized in contrast to restricted language interaction found before the parent education programs were implemented.

The variety of studies reported indicate that early language deprivation, including inadequate home language and control methods for verbal and cognitive skill development, is a critical deficiency. Training programs show that, given a qualified program, children can be educated in either group or home settings. In addition, efforts

to use mothers in both home and group settings to assist in groups and/or apply new methods at home have shown considerable promise.

Use of Incentives

The most effective motivation for the mother's involvement in day care programs is her concern for her child's cognitive growth (Hess et al., 1971). A deep and continuing concern for her child is the key to recruiting a mother's commitment to participate in the day care program.

The relationship of the mother to the day care center, however, is inherently different from her relationship to other child development efforts such as Head Start. Mothers send their children to Head Start programs primarily to meet the educational needs of the child. In contrast, mothers may send their children to day care programs primarily to meet the needs of the mother (i.e., to release the mother from child care duties during her working hours).

Many mothers who place their children in day care centers will be under intense psycho-social pressure due to the financial limitations of poverty; the mother may view the day care center as a more effective teacher and socializer of her young child than herself. A consequence of this pressure may cause the mother to seek release or to "unlink" herself from the additional concerns of child-rearing responsibilities. This unlinking mechanism has been well documented in mental health literature (Caplan, 1961). Therefore, parent involvement becomes a necessity.

In order to be successful, parent programs should involve the majority of parents in acquiring strategies, understandings, and

attitudes useful to them in their role. Parents must participate actively, frequently, and continuously. A major problem for Head Start and now Day Care is to maintain consistent involvement of the parents in the program activities.

Bauch, et al., (1973) while investigating factors which influence parental participation in early childhood programs at Head Start centers, found the most important explanatory variable to be center size (small centers have larger participation). Other contributing factors were the availability and delivery of services such as baby-sitting and transportation and the purpose of the parental participation (an educational program is more appealing than a call to participate by aiding the lunch-service program). The research, however, did not compare these "incentives" to parental participation through systematic experimentation.

In a recent overview of programs for disadvantaged parents (Chilman, 1973), the usefulness of supportive services to parents such as babysitting during the time of parental programs at centers was considered, but different types of services had not been compared, nor were monetary incentives even mentioned as possible factors influencing parental participation.

In summary, procedures for increasing parental involvement call for providing extra services that may facilitate participation: arranging home visits, scheduling conferences, providing babysitting and transportation, enlisting aid of enthusiastic parents, and demonstrating friendship and interest. Interestingly, no study that dealt primarily and systematically with the development and distribution of incentives for parental involvement was found in the literature.

One might conclude that research that examines development of motivational incentives necessary to initiate and maintain the participation of the mother in a day care parent program is of utmost importance.

This project examined the effects of three different incentive models on the initiation and maintenance of mother involvement in her child's day care parent program.

CHAPTER III

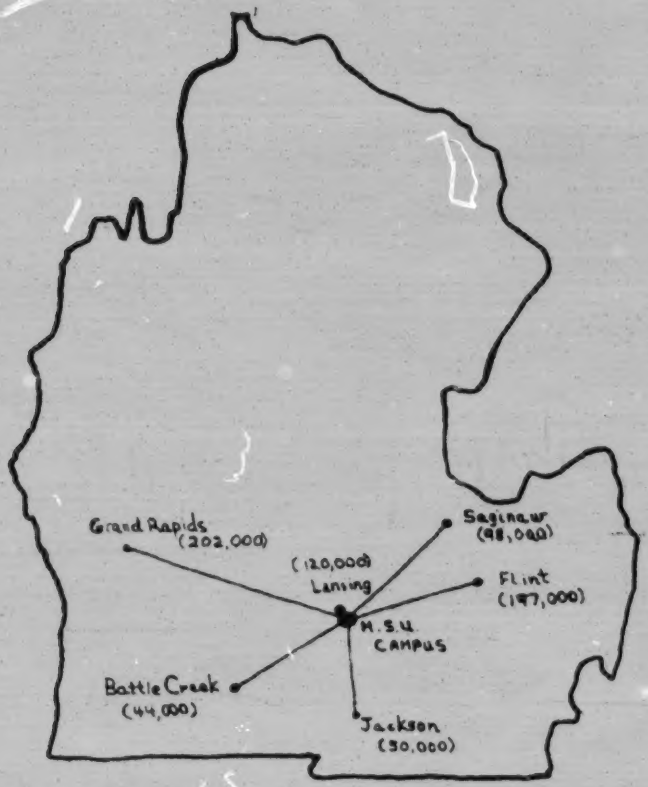
IMPLEMENTATION AND PROCEDURES

A. Sample Selection.

Six day care centers were selected for participation in the project through the following process: the ten largest cities within an approximately seventy mile radius of the Michigan State University campus and at least twenty miles distant from each other were identified. Six of these cities were randomly selected for inclusion in the study. Federally licensed centers within these cities eligible to enroll ADC mothers were then identified. Centers which had less than 25 or more than 60 full-time children enrolled were dropped from consideration. Final selection was made randomly from the remaining day care centers whose directors had indicated a willingness to participate in the project.

Figure 3.1 shows the geographical locations of the final sample of centers. Further description of the centers is provided in Appendix C.

FIGURE 3.1
Geographical Location in Lower Michigan
of Day Care Centers Within Sample



Description of families with children attending the centers in the sample:

Tables 3.1 through 3.15 provide demographic descriptions of the families comprising the centers' clientele from before the PTT program until two months after it ended. For convenience, the data is grouped according to the varying financial incentives that will be offered at the time of the PTT program.

TABLE 3.1

Children Initiating Attendance at Day Care Centers
by Time Periods

	TOTAL Children (N=282)	Incentive 1			Incentive 2			Incentive 3		
		Total (N=108)	$5 CENTERS 1(N=56)	3(N=52)	Total (N=88)	babysitting and transportation CENTERS 4(N=52)	6(N=36)	Total (N=86)	no financial incentive CENTERS 2(N=37)	5(N=49)
Date child started at center										
after PTT	35	18	12	6	8	8	0	9	3	6
within 1 mo. prior to PTT	24	11	1	10	6	6	0	7	3	4
2,3 mos. prior to PTT	18	6	1	5	6	6	0	6	4	2
4-6 mos. prior to PTT	69	21	11	10	22	12	10	26	13	13
7-12 mos. prior to PTT	46	8	1	7	23	15	8	15	4	11
over 1 year prior to PTT	59	14	1	13	23	5	18	22	10	12
(missing data)	31	30	29	1	0	0	0	1	0	1

Tables 3.1 and 3.2 present evidence of the turnover rate at each center. Centers 1 and 6 present the greatest contrast. Center 6 closed during the time period in which posttesting occurred, however, it can be seen that this center did not have a large turnover previous to this. Center 1 contained a large number of children who terminated attendance during and after pretesting. These children, primarily black, left the center at the time the director, also black, was replaced by a new white director. Center 6 only lost one child during the time from pretesting until the center closed (about seven months). All centers show a rise in attendance 4-6 months prior to the PTT. This includes the month of September, the natural start of a new year after a summer's vacation.

TABLE 3.2

Termination of Attendance at Day Care Center

	Total Children (N=306)	$5 Incentive			Babysitting and Transportation Incentive			No Financial Incentive		
		Total	Centers		Total	Centers		Total	Centers	
			1	3		4	6		2	5
Date child terminated attendance										
did not terminate through post-testing	184	80	40	40	46	46	0	58	23	35
during post-testing	46	3	3	0	36	1	35	7	1	6
during PTT	36	18	13	5	4	4	0	14	9	5
before PTT during or after pre-testing	35	30	24	6	1	0	1	4	4	0
(missing data)	5	1	0	1	1	1	0	3	0	3

TABLE 3.3

Children at Day Care Centers

by Sex and Race

	TOTAL Children (N=282)	Incentive 1			Incentive 2			Incentive 3		
		Total (N=108)	$5 CENTERS 1(N=56)	3(N=52)	Total (N=88)	babysitting and transportation CENTERS 4(N=52)	6(N=36)	Total (N=86)	no financial incentive CENTERS 2(N=37)	5(N=49)
Sex[1]										
male	132	52	26	26	37	24	13	43	20	23
female	150	56	30	26	51	28	23	43	17	26
Race[1]										
white	108	51	14	37	41	41	0	16	9	7
Negro	157	45	37	8	45	9	36	67	28	39
other[2]	17	12	5	7	2	2	0	3	0	3

[1]Data available for 100% of sample.

[2]Includes mixed.

Table 3.3 describes the centers' composition by sex and race of children in attendance. Note that there are slightly more female children than male children in the sample. Also, Negro children outnumber white children three to two in the total sample. None of the centers are racially balanced; they are either predominantly black or predominantly white. Within each of the financial incentive conditions one center is predominantly white and one predominantly black. Both centers in the "no incentive" condition are predominantly black.

Table 3.4 presents the number of children by age at the start of the PTT program. One can observe that most children were between the ages of 3 and 4. A somewhat smaller mode occurred between the ages of 4 and 5. Fewer children were under 3 or over 5.

TABLE 3.4

Number of Children by Age Groupings

at Start of PTT Program

	TOTAL Children (N=282)	Incentive 1			Incentive 2			Incentive 3		
		Total (N=108)	$5 CENTERS 1(N=56)	3(N=52)	Total (N=88)	babysitting and transportation CENTERS 4(N=52)	6(N=36)	Total (N=86)	no financial incentive CENTERS 2(N=37)	5(N=49)
Child's age:										
under 36 mos.	38	19	14	5	8	7	1	11	4	7
36-47 mos.	104	28	16	12	41	24	17	35	12	23
48-59 mos.	76	29	11	18	24	12	12	23	8	15
60 mos. and over	21	9	3	6	4	1	3	8	8	0
(missing data)	43	23	12	11	11	8	3	9	5	4

TABLE 3.5

Children by Ordinal Position in Family

	TOTAL Children (N=282)	Incentive 1 Total (N=108)	$5 CENTERS 1(N=56)	3(N=52)	Incentive 2 Total (N=88)	babysitting and transportation CENTERS 4(N=52)	6(N=36)	Incentive 3 Total (N=86)	no financial incentive CENTERS 2(N=37)	5(N=49)
Child's Ordinal Position										
1st	161	60	30	30	51	31	20	50	31	19
2nd	63	25	11	14	22	15	7	16	3	13
3rd	19	5	3	2	7	3	4	7	2	5
4th or younger	27	10	5	5	6	1	5	11	0	11
(missing data)	12	8	7	1	2	2	0	2	1	1

TABLE 3.6

Number of Children in Family

	TOTAL Families (N=249)	Incentive 1 Total (N=90)	$5 CENTERS 1(N=44)	3(N=46)	Incentive 2 Total (N=78)	babysitting and transportation CENTERS 4(N=44)	6(N=34)	Incentive 3 Total (N=81)	no financial incentive CENTERS 2(N=36)	5(N=45)
Number of children in family										
1	115	39	19	20	35	20	15	41	27	14
2	73	28	11	17	26	16	10	19	7	12
3	23	4	1	3	9	5	4	10	2	8
4 or more	30	14	9	5	6	1	5	10	0	10
(missing data)	8	5	4	1	2	2	0	1	0	1

Table 3.5 indicates that most of the children in the study are oldest children, in fact, most are singletons (Table 3.6).

TABLE 3.7

Children in Day Care Centers by Average Age at Time Entered Center[1]

	Incentive 1		Incentive 2		Incentive 3	
	$5 CENTERS		babysitting and transportation CENTERS		no financial incentive CENTERS	
	1(N=56)	3(N=52)	4(N=52)	6(N=36)	2(N=37)	5(N=49)
Average Age (months	40.13	43.70	39.01	37.66	41.88	38.74

[1]Missing data for 23 children.

Table 3.7 indicates that Center 5 contained the youngest group of children at age of entering day care. The children there averaged three-and-one quarter years at the time they began attending at the center. Center 3 contained the oldest group of children at age of entering day care. These children averaged three and two-thirds months when they entered day care. However, this data is true only for the centers surveyed. The children may have attended other day care centers - or have had other forms of child care - before entering the sample centers.

TABLE 3.8

Average Number of Children with Full and Part Time Attendance at Day Care Centers

	TOTAL Children (N=282)	Incentive 1			Incentive 2			Incentive 3		
		Total (N=108)	$5 CENTERS 1(N=56)	3(N=52)	Total (N=88)	babysitting and transportation CENTERS 4(N=52)	6(N=36)	Total (N=86)	no financial incentive CENTERS 2(N=37)	5(N=49)
Full time attendance (5 full days)	218	71	48	23	72	37	35	75	29	46
Part time attendance (less than 5 full days)	47	32	6	26	8	7	1	7	7	0
(missing data)	17	5	2	3	8	8	0	4	1	3

Attendance patterns are further described in Table 3.8. The only center with more part-time than full-time attenders was Center 3. Centers 5 and 6 serve full-time children almost exclusively. Centers 1, 2 and 4 have a small group of part-time children. Some of the part-time children are kindergarten children who spend the rest of each day at school.

The families in the day care sample were nearly evenly divided between ADC recipients and those that were not. The two centers within incentive 2 are unusual in that both centers have very few families receiving ADC. Centers 1 and 5 have similarly large ADC populations (Table 3.9).

TABLE 3.9

Families Receiving Aid for Dependent Children

	TOTAL Families (N=249)	Incentive 1			Incentive 2			Incentive 3		
		Total (N=90)	$5 CENTERS 1(N=44)	3(N=46)	Total (N=78)	babysitting and transportation CENTERS 4(N=44)	6(N=34)	Total (N=81)	no financial incentive CENTERS 2(N=36)	5(N=45)
Family receives ADC	125	60	37	23	10	10	0	55	16	39
Family does not receive ADC	120	29	7	22	66	32	34	25	20	5
(missing data)	4	1	0	1	2	2	0	1	0	1

TABLE 3.10

Families by Marital Status

	TOTAL Families (N=249)	Incentive 1			Incentive 2			Incentive 3		
		Total (N=90)	$5 CENTERS 1(N=44)	3(N=46)	Total (N=78)	babysitting and transportation CENTERS 4(N=44)	6(N=34)	Total (N=81)	no financial incentive CENTERS 2(N=36)	5(N=45)
Married, two parents together	109	36	20	16	44	24	20	29	17	12
Single Parent[1]	133	51	22	29	33	19	14	49	19	30
(missing data)	7	3	2	1	1	1	0	3	0	3

[1] Includes married parent (usually mother) with spouse not in home.

More families were headed by single parents than 2 parents. Centers 4 and 6 (B-T incentive) were again unique, both enrolling more children from intact families than single parent families (Table 3.10).

All centers enroll more children whose mothers work than not except Center 1. Of the mothers that do work, full-time employment outnumbers part-time work by at least 6 to 1. Center 6 deserves attention since all mothers work full time (Table 3.11).

More mothers hold clerical jobs than any other type of employment. Of the 170 women working, nearly 1/4 of them hold professional or managerial positions (Table 3.12).

TABLE 3.11

Mothers Employed

	TOTAL Mothers (N=249)	Incentive 1			Incentive 2			Incentive 3		
		Total (N=90)	$5 CENTERS 1(N=44)	3(N=46)	Total (N=78)	babysitting and transportation CENTERS 4(N=44)	6(N=34)	Total (N=81)	no financial incentive CENTERS 2(N=36)	5(N=45)
Total non-working mothers	72	35	25	10	17	13	4	20	9	11
Total working mothers	170	52	17	35	58	28	30	60	27	33
full time	138	37	9	28	56	26	30	45	21	24
part time[1]	22	9	3	6	2	2	0	11	4	7
no information on hours	10	6	5	1	0	0	0	4	2	2
(missing data)	7	3	2	1	3	3	0	1	0	1

[1]or variable hours.

TABLE 3.12

Maternal Employment by Type of Work[1]

	TOTAL Working Mothers (N=170)	Incentive 1			Incentive 2			Incentive 3		
		Total (N=52)	$5 CENTERS 1(N=17)	3(N=35)	Total (N=58)	babysitting and transportation CENTERS 4(N=28)	6(N=30)	Total (N=60)	no financial incentive CENTERS 2(N=27)	5(N=33)
Professional or Managerial	38	9	2	7	21	9	12	8	8	0
Sales	7	2	0	2	2	0	2	3	0	3
Clerical and kindred workers	67	22	5	17	25	15	10	20	7	13
Blue-collar workers	7	3	1	2	1	0	1	3	3	0
Service workers	35	9	4	5	8	3	5	18	6	12
(missing data)	16	7	5	2	1	1	0	8	3	5

[1]Data from the mothers who are known to be working, 70% of all mothers.

Since more than half of the families were headed by single parents (usually the mother), data were limited concerning the occupations of fathers. Of the 131 men for whom data were available, only 10% of the fathers were not working. For those employed, nearly twice as many held blue collar jobs as white collar (Table 3.13).

TABLE 3.13

Paternal Employment by Type of Work[1]

	TOTAL Fathers (N=131)	Incentive 1			Incentive 2			Incentive 3		
		Total (N=36)	55 CENTERS 1(N=17)	3(N=17)	Total (N=53)	babysitting and transportation CENTERS 4(N=27)	6(N=26)	Total (N=44)	no financial incentive CENTERS 2(N=44)	5(N=22)
Fathers known not working	12	4	3	1	4	3	1	4	2	2
Fathers known working	119	30	14	16	49	24	25	40	20	20
white collar	41	10	2	8	21	14	7	10	6	4
blue collar	71	18	10	8	25	9	16	28	12	16
unknown type of work	7	2	2	0	3	1	2	2	2	0

[1]Data was available about fathers from about half the sample families.

TABLE 3.14

Student Status of Mothers

	TOTAL Mothers (N=249)	Incentive 1			Incentive 2			Incentive 3		
		Total (N=90)	$5 CENTERS 1(N=44)	3(N=46)	Total (N=78)	babysitting and transportation CENTERS 4(N=44)	6(N=34)	Total (N=81)	no financial incentive CENTERS 2(N=36)	5(N=45)
Student	72	25	12	13	13	6	7	34	17	17
Not student	151	54	24	30	57	31	26	40	15	25
(missing data)	26	11	8	3	8	7	1	7	4	3

More than a third of the mothers were currently enrolled as students during the time of the PTT Program. Center 2 (no financial incentive) is unique in enrolling more children of student mothers than non-student mothers. Indeed the ratio of students to non-students within incentive 3 is nearly equal. About half the mothers in the centers offering the $5 incentive are students; about 1/4 of those in the centers offering B-T were studying (Table 3.14).

When mothers are divided into 5 categories of terminal education level one may note nearly equal numbers of women who have finished high school and who have had some college. Only about 12% of the mothers did not finish high school. A similar number had completed college or beyond. Also another 12% had received occupational or professional training (Table 3.15).

TABLE 3.15

Terminal Education of Mothers

	TOTAL Mothers (N=249	Incentive 1			Incentive 2			Incentive 3		
		Total (N=90)	$5 CENTERS 1(N=44)	3(N=46)	Total (N=78)	babysitting and transportation CENTERS 4(N=44)	6(N=34)	Total (N=81)	no financial incentive CENTERS 2(N=36)	5(N=45)
Did not finish high school	32	8	6	2	9	5	4	15	2	13
Finished high school	65	26	7	19	14	11	3	25	9	16
Some occupational or professional training[1]	33	12	7	5	15	8	7	6	3	3
Some college	60	16	3	13	16	6	10	28	17	11
Finished and/or beyond college	27	5	2	3	18	9	9	4	4	0
(missing data)	32	23	19	4	6	5	1	3	1	2

[1] After or instead of high school.

Summary of description of families:

Similarities across centers:

(1) Many single parents.

(2) Many families receiving ADC.

(3) Equal enrollments by sex.

(4) Most children between ages of 3 and 5.

(5) Most children are oldest children and members of small-sized families.

(6) Most mothers work, and do so full time.

(7) Mothers were fairly well educated. Only about 12% had not finished high school.

Differences across centers:

(1) None racially balanced.

(2) Center in Incentive 2 (B-T) had more stable, regular attendance than those in other Incentive groupings. However, Center 6 closed several months after PTT ended.

(3) Only Center 3 ($5 incentive) enrolled many part-time children.

(4) Centers vary according to the student status of mothers. Only the two centers in the "no-incentive" category had nearly as many student mothers as nonstudent mothers.

B. Measurement

The basic criterion measure of the effect of financial incentives upon a day care center mother's attendance at the parent program was a record of each mother's attendance at the twelve-session PTT program. Concurrently records were kept of use of the services of babysitting and transportation at the appropriate child care centers.

The effect of each incentive model is further analyzed through measures of mother-child interaction and child self-esteem on a pre-post basis. These variables and other attitudinal studies of the day care center mother which are reserved for subsequent analysis are summarized in Table 3.16.

TABLE 3.16

Measurement of Variables of Interest
(Independent variables are incentive treatments 1, 2 and 3)[2]

Dependent variable measured	Instrumental Source	Time(s) of Data Collection
attendance at PTT sessions	- - -	concurrent
quality of mother-child interaction	Hess & Shipman Toy Sort (1966)	pre - post
child self-esteem	Brown IDS Self Concept Referents Test (1966)	pre - post
maternal generalized expectancy for internal vs. external control of reinforcement[1]	Scale to Measure Internal-external Control (adapted Rotter, 1966)	pre - post
maternal attitudes towards education and employment[1]	Home Interview (adapted Hess & Shipman, 1966)	pre - post
maternal evaluation of PTT program[1]	PTT Evaluation Form (Kuipers, Cunningham, 1972)	post

[1] not analyzed in initial report.

[2] see Section C - Design of Experiment.

Brown IDS Self Concept Referents Test

The Brown test was designed to assess the self concept of young (four to six-year-old) children using a photographic technique (see Appendix A). The test attempts to measure the extent to which the child perceives himself, his mother, his teacher and his peers as seeing him positively or negatively. The mother and child perceptions were most pertinent to this study so these items were abstracted and administered.

The setting of this structured test was a special room at each day care center. Test administration took approximately five minutes.

Brown indicates that this test minimizes the extent to which psychological interpretation must be imposed upon obtained responses, maximizes comparability of responses among children, as well as tests directly the stability of responses over a specified period of time.

In the present study an internal reliability of .81 for mother scores and .76 for child scores was achieved when the Brown pretests were analyzed by the Hoyt measure of internal consistency.

The Brown test had been standardized in previous studies on 38 four-year-old lower class Negro subjects and 38 white middle-class subjects of the same age. Test-retest reliability over three weeks was .76 for white S's and .71 for Negro S's on the self referent.

This test has also been used by the Institute for Family and Child Study in previous research (Boger, Kuipers, Beery, 1969).

The Hess and Shipman Toy Sort

The Hess and Shipman Mother-Child Interaction tests evolved from a research project at the University of Chicago Early Education Research Center studying differences in maternal teaching styles related to

children's learning. The Toy Sort was used in this study (see Appendix A). Mothers and children were brought to a special room in the local day care center where each mother was to teach the same educational game to her child. The teaching situations were structured so that information to be conveyed to the child was constant for all subjects, but each mother was free to use any means or techniques she desired in attempting to convey it. The interaction was audiotaped for later analysis. The child variables of especial interest were learning ability, attention to mother, and quality of responses. The parent variables examined included informing, motivating, seeking feedback, reinforcement, specificity of directions and use of models. The interaction was studied within a session of about ten to thirty minutes in duration.

The Toy Sort has been standardized on four-year-old children with their mothers, 82 boys and 81 girls. The Toy Sort evidences construct validity significant at the .01 level. Inter-rater reliability of 85% was reached in this study. The Institute for Family and Child Study at Michigan State University has used this test in previous research with preschool-aged children (Boger, Kuipers, Beery, 1969).

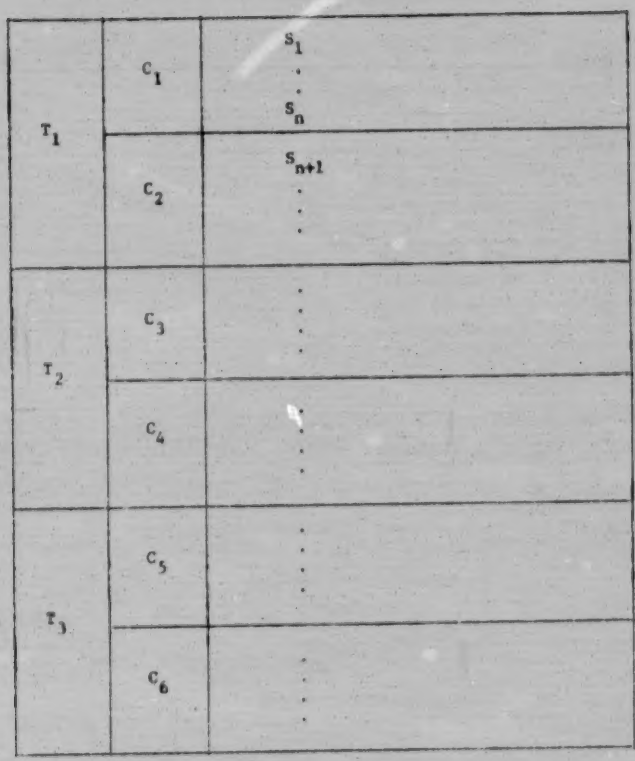
C. Design of Experiment:

The study employs a 3 x 2 nested design appropriate for studying the effect of financial incentives on parental (primarily maternal) attendance at parent involvement programs at day care centers. Three incentive treatments were offered in connection with the PTT Parent Program. To assist in making comparisons and to appear fair to the parents involved, all families within a day care center received the same incentive. By random assignment, two centers received the five dollar incentive, and two received no financial incentive. The design is shown in Figure 3.2.

Because centers were randomly assigned to treatment, differences between centers within incentives can be assumed to be due to random error and thus not confound the main effect of incentives.

FIGURE 3.2

DESIGN MATRIX



*T = Treatment
C = Center
S = Subject (Mother-child pair)

T_1 = $5/meeting to attend

T_2 = Babysitting and transportation provided/meeting to attend

T_3 = No financial incentives/meeting to attend

Three incentive treatment models are being tested as to their effectiveness in initiating and maintaining the involvement of the working mother in a parent program designed to support the role of the mother as the primary teacher and socializer of her child:

Incentive Treatment Model 1

A. Encourages the mother to participate in the parent program on the basis of her concern for her role as the primary teacher and socializer of her child.

B. Encourages the mother to participate in the parent program through financial remuneration in the form of a direct stipend of $5/meeting to attend.

Incentive Treatment Model 2

A. Encourages the mother to participate in the parent program on the basis of her concern for her role as the primary teacher and socializer of her child.

B. Encourages the mother to participate in the parent program through provision of babysitting at the day care center during the parent meeting and transportation for mother (and children) to and from the center.

Incentive Treatment Model 3

A. Encourages the mother to participate in the parent program on the basis of her concern for her role as the primary teacher and socializer of her child.

B. No financial incentive/meeting to attend.

D. Implementation procedures

Two centers were randomly assigned to each of the three incentive conditions which were compared as to their effectiveness in initiating and maintaining the involvement of the day care mother in a parent program (PTT) designed to support her role as the primary teacher and socializer of her child. Incentive treatment model one encouraged the mother to participate in the parent program on the basis of her concern for her role as the primary teacher and socializer of her child as well as encouraging her through provision of funds for attending the program - a five dollar stipend per meeting attended. Incentive treatment model two encouraged the mother to participate in the parent program on the basis of her concern for her role as the primary teacher and socializer of her child as well as through the provision of babysitting and transportation services. Incentive treatment model three encouraged the mother to participate in the parent program solely on the basis of her concern for her tole as the primary teacher and socializer of her child.

The mothers who attended the parent program under Incentive Model One received the stipend in the form of a check mailed directly to their homes. In those cases in which the father or other adult family member attended the sessions, that adult received the incentive rather than the mother. If two adults were present representing a family, only one adult received the five dollar stipend.

Those adults attending the parent program under Incentive Model Two had merely to bring their children to the meeting to receive the

babysitting at the center. If the mothers desired transportation for themselves and for their children, they notified the PTT teacher and the transportation was arranged.

All three incentive groups were treated as follows:

1. Each group of mothers met in twelve weekly two-hour sessions with the PTT teacher (who was the local day care center director or head teacher) and with one aide who assisted with the presentation of the program.
2. Classes ran concurrently across centers.[1]
3. Training and instruction were provided weekly by two professional staff members of the Institute for Family and Child Study. These staff members, experienced preschool teachers, had themselves been trained in the PTT program by one of its major developers, Dr. Judith Kuipers.
4. Each local PTT teacher and aide met with the trainers each week for an evaluation of the previous week's program.
5. The two professional persons involved in training, a white male and an Afro-American female, were consistent across all training groups in an attempt to minimize effects of teacher variability.

[1] In one center the PTT teacher terminated employment at the day care center one day before the first meeting was to be held. Subsequent replacement by new personnel caused the meetings to be rescheduled two weeks later.

6. Teachers refrained from direct use of materials used in the PTT programs in their daytime classroom programs with the children.
7. Each mother in attendance at the PTT program was asked to spend at least ten minutes a day working on the materials with her child.
8. Materials were to be kept in a bag provided to be used "in a special place" at a "special time" each day.
9. Mothers were asked to verbally evaluate each week the amount of time spent with her child and general comments on the interaction.
10. The agenda for each weekly session followed this pattern:

    7:00 - 7:20 Evaluation of previous week's material

    7:20 - 8:00 Developing instructional material

    8:00 - 8:20 Refreshments

    8:20 - 9:00 Discussion of use of lesson plans, materials and handouts

Implementation Schedule

weeks of:	December 1, 1972 - Jan. 14, 1973	PRETESTING
weeks of:	January 17, 1973 - April 15, 1973	PTT PROGRAM DELIVERY
weeks of:	April 17, 1973 - June 30, 1973	POSTTESTING

CHAPTER IV

RESULTS

I. Effect of Financial Incentives on Initiating Attendance at a Parent Education Program (PTT) in Day Care Centers

An analysis of variance was completed to answer the first part of research question one: "Do incentives make a difference in initiating attendance at parent programs in day care centers?" The total sample of families potentially able to participate in each center was studied (N = 249). Table 4.1 indicates significant main effects for incentives vs. no incentives, but significant center differences ($p \leq .0006$) also exist. Post hoc Scheffé contrasts show that significant differences exist between the centers in the financial incentive conditions.

TABLE 4.1

ANOVA Results of PTT Attendance

Based on Total Families Available to Participate (N=249)

	Test of Main Effect of Incentives	Test of Center differences within Incentives
F ratio	9.1933	6.0226
df	2 and 243	3 and 243
Level of Probability	.0002	.0006

TABLE 4.2
ANOVA Results of PTT Attendance Based On
Total Families Available to Participate Excluding Center 1
(N=205)

	Test of Main effect of Incentives	Test of Center Differences Within Incentives
F Ratio	14.0595	2.1046
df	2 and 200	3 and 200
Level of Probability	.0001	.1246

From prior knowledge of the unusual circumstances surrounding the implementation of the project in Center 1, another analysis was run excluding center 1.[1] Table 4.2 shows that with this adjustment, center differences no longer exist. A significant main effect for incentive ($p < .0001$) clearly indicates differential attendance patterns for those families in centers receiving different incentives. Complex contrasts were used in the hypothesis testing. Scheffe post hoc contrasts show that families receiving any financial incentive had a better attendance than those receiving no financial incentive, and also that the $5 incentive group had higher attendance

[1] See Appendix C for explanation of unusual circumstances surrounding Center 1.

than the babysitting and transportation (hence B-T) group. However, this second contrast is based on only one center's participation in the $5 incentive group as contrasted to two centers each in the other incentive groups. These results, therefore can only be regarded with caution.

Table 4.3 presents the means and standard deviations of the attendance at the PTT meetings. The means represent the average number of meetings attended per family within each center.

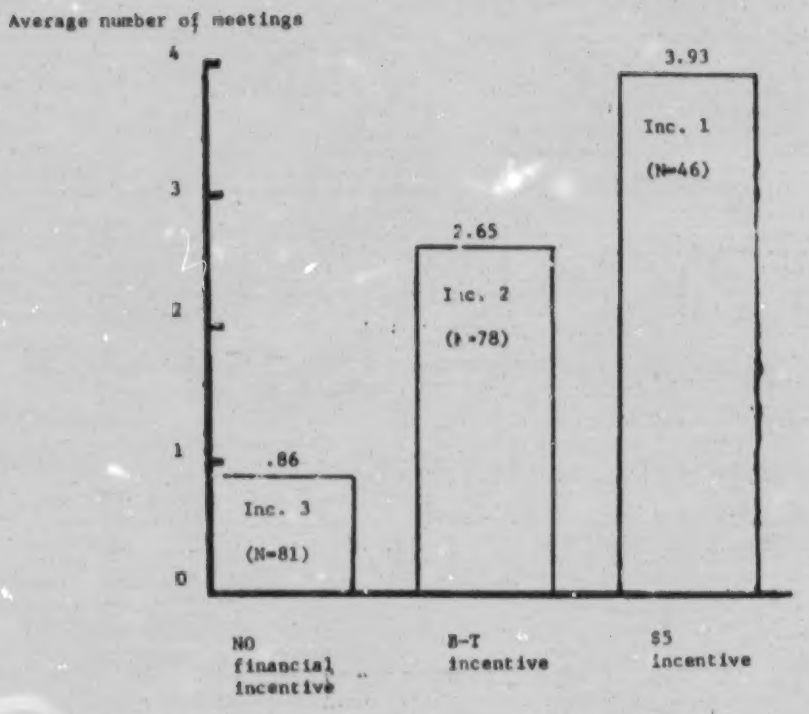
Table 4.3

Average Number of Meeting Attended per Family by Center[1] (N = 249)

Incentive	Center	N	Means	Standard Deviation
$5 Incentive	1	44	1.48	2.65
	3	46	3.94	4.51
Babysitting and Transportation Incentive	4	44	3.32	3.83
	6	34	1.79	3.00
No Financial Incentive	2	36	.92	1.71
	5	45	.82	2.02

[1] the data represent all families potentially able to participate.

FIGURE 4.1



Average Number of Meetings Attended per Family:

12 Meetings Held

An evident trend is for greater PTT attendance in the financial incentive conditions.

The average attendance within incentives as reported in Figure 4.1 supports a conclusion that differential attendance patterns existed: the $5 incentive group having the highest attendance, the B-T group having the next highest attendance, and the "no incentive" group having the poorest attendance.

II. Effect of Financial Incentives on Maintaining Attendance at a Parent Education Program (PTT) in Day Care Centers

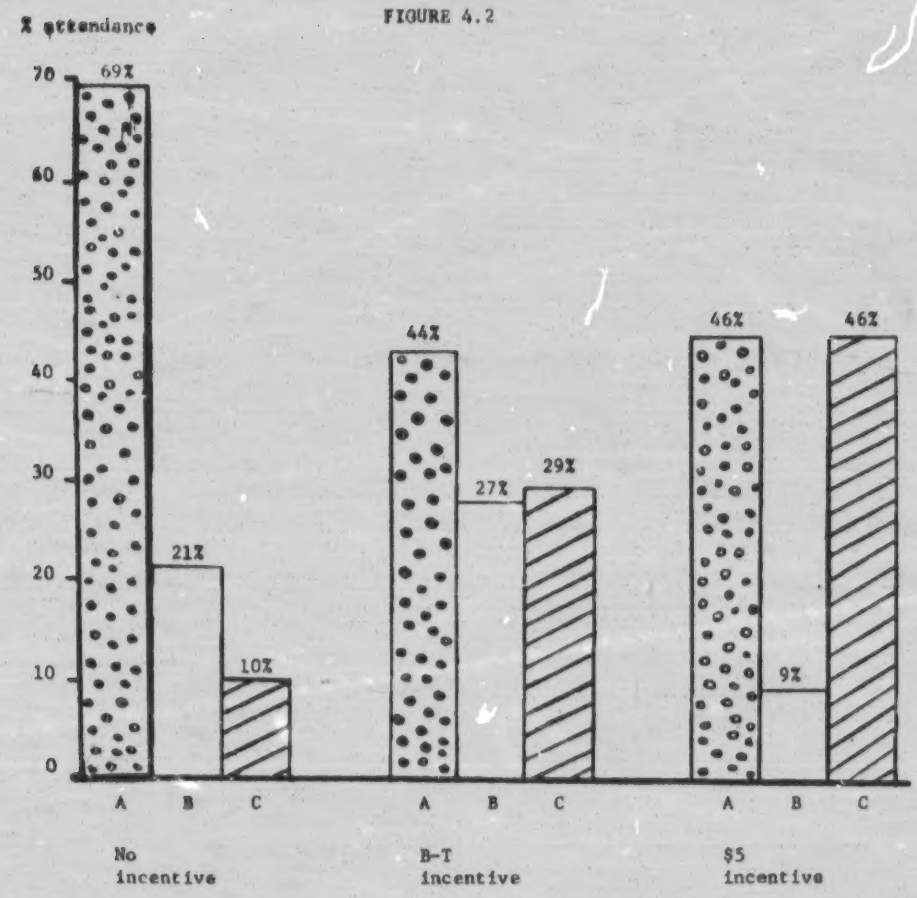
To answer the second part of research question one: "Do incentives have an effect on maintaining attendance?" the range shown previously in Table 4.3 show a consistent decrease, moving from the $5 incentive to the B-T incentive, and then to the "no incentive" group (especially if Center 1 is excluded). Table 4.4 and Figure 4.2 also illustrate the differential attendance patterns based on incentives.

TABLE 4.4

Percent of People Initiating and Maintaining Attendance by Center[1] (N = 249)

Number of meetings attended	Percent attendance by Centers within incentive group					
	$5 incentive		Babysitting & transportation incentive		no incentive	
	1	3	4	6	2	5
0	59	46	36	53	61	76
1-3	25	9	25	29	28	16
4-12	16	46	39	18	11	9

FIGURE 4.2



Percent of People Initiating and Maintaining Attendance by Incentive (excluding Center 1) (N=205)

A: zero attendance
B: 1 - 3 meetings attended
C: 4 - 12 meetings attended

A larger percentage of families in the $5 incentive group attended four or more meetings than in either of the two other incentive groups. The "no incentive" group had the lowest percentage of attendance for four or more meetings.

Four times as many families maintained attendance for four or more meetings in the incentive groups than in the no incentive group.

These results indicate that families receiving an incentive not only initiated a greater amount of parental involvement in the day care center program through attendance at a parent education program, but also maintained more participation compared to those families receiving no incentive.

III. Effect of Financial Incentives on Child's Self-Concept

A secondary objective of the study was to ascertain the effects of financial incentives on the quality of the mother-child interaction and on the child's self-esteem. The child's self-esteem was measured before and after the PTT Program using the Brown IDS Self Concept Referents Test. A multivariate analysis of covariance was used so that initial differences reflected in pretest scores were eliminated in analyzing differences across groups on the posttest.

An initial analysis was made using the total sample of children for which pre and posttest data were available on the Brown test. This basic analysis would test for general center or incentive effects. Both children from families whose parents attended the PTT and children from families whose parents did not attend were included.

Table 4.5

ANCOVA On Brown IDS Self Concept Referents Scores On Total Families (N = 121)

	Test of main effect for incentives	Test of Center Differences nested within incentives
F ratio	3.3661	2.3549
df	4 and 224	6 and 224
Level of Probability	.0107	.0317

Univariates Contributing To Center Differences

	Post Mother	Post Self
F Ratio	3.5456	4.6940
df	3 and 113	3 and 113
Level of Probability	.0169	.0040

Univariates Contributing to main effect

	Post Mother	Post Self
F ratio	6.6420	5.7275
df	2 and 113	2 and 113
Level of Probability	.0019	.0043

Table 4.5 shows significant main effects for incentives ($p \leq .0107$) but significant center effects ($p \leq .0317$) were revealed. Both univariates, mother score ($p \leq .0169$) and self score ($p \leq .0040$) contributed to center differences. However, Scheffé post hoc comparisons indicate that in both the mother and self referents, these center differences only exist between Center 1 and Center 3; that is, within the $5 incentive group.

In reference to the main effect, results of Scheffé post hoc comparisons show that the effect due to incentives was mainly in differences between incentive 1 ($5) and incentive 2 (B-T). In incentive 2, both mother and child referents scores were higher on the Brown at the end of the program than were the scores for children in Incentive 1. However, no significant differences were found between the incentive conditions (1 and 2) vs. no incentive (3).

Table 4.6

For Total Families

ANCOVA on Brown IDS Self Concept Referents Scores (excluding center 1)(N=102)

	Test for main effects for incentives	Test for center differences nested within incentives
F ratio	5.2788	.1864
df	4 and 188	4 and 188
level of probability	.0005	.9453

Univariates Contributing To Incentive Effect

	Post mother	Post Self
F ratio	10.1492	10.4675
d f	2 and 95	2 and 95
level of Probability	.0002	.0001

Based on this information and the prior suspicions of unusual circumstances surrounding Center 1, a parallel analysis was done excluding Center 1. Table 4.6 illustrates that in this analysis the center effects no longer exist, and that a clear significant main effect for incentives ($p \leq .0005$) does exist. Both the mother and self univariates are significant. Both contrasts on both univariates are also significant. The direction of the least square estimates indicates that on both the mother and self referents the "no incentive" group had higher adjusted post scores than the financial incentive groups. Also, the children in the B-T group performed better than the $5 incentive group. The table of cell means, Table 4.7, illustrates these differences.

TABLE 4.7
Cell Means on Brown IDS Self Concept Referents Test for Total Families (excluding center 1)

Incentive	Pre Self	Post Self	Pre Mother	Post Mother
$5 Inc.	11.48	8.30	11.85	8.59
B-T Inc.	11.13	11.76	10.61	11.67
No Inc.	11.45	11.93	11.14	12.10

Within the "no incentive" group and the B-T group, the change from pre to posttesting was in a positive direction (see Table 4.7), while in the $5 incentive group the change was in a negative direction. This unexpected finding seems to indicate a contradiction. Although differential attendance patterns were illustrated when comparing families receiving financial incentives with those not receiving incentives, these results on the measures of the child's self-concept indicate that children from families with no financial incentive or with the service incentive of babysitting and transportation have greater positive change than children from those families with the $5 incentive. Further analyses were executed to investigate these findings.

Three-way multivariate analyses of covariance were used to test for interaction and main effects for center, incentive and attendance. The attendance effect was based on any attendance vs. no attendance at PTT meetings.

TABLE 4.8

3 way MANCOVA on Brown IDS Self Concept Referents Test
(N = 121)

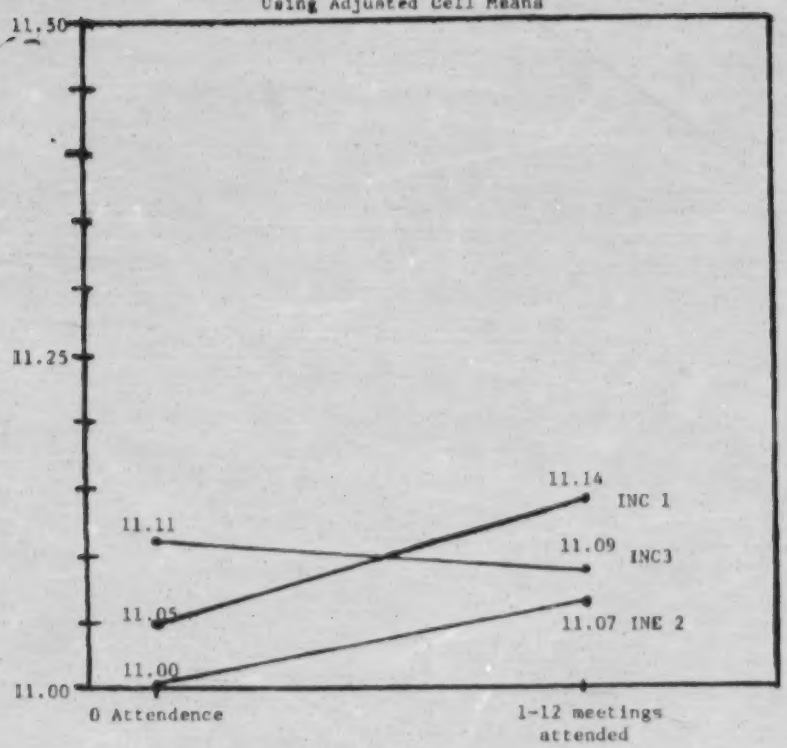
	F Ratio	d f	Level of Probability
3 way Interaction (Center within incentive x attendance interaction)	1.6971	6 & 212	.1231
2 way Interaction (Incent X Attend)	2.6401	4 & 212	.0349
Center Effects	2.8232	6 & 212	.0116
Attendance Effects	1.330	2 & 106	.2689
Incentive Effects	3.6608	4 & 212	.0067

Univariates Contributing to Significant Interaction

	F Ratio	d f	Level of Probability
Post self	1.9042	2 & 107	.1540
Post Mother	2.6722	2 & 107	.0738

Table 4.8 summarizes the results. A significant two-way interaction ($p \leq .0349$) exists between incentive and attendance. This is shown in Figure 4.3. Post mother univariates were the only scores approaching significance ($p \leq .0738$).

Figure 4. 3
Interaction of Incentives X Attendence
Brown Self Concept Referents Test
Using Adjusted Cell Means



POST MOTHER

INC 1=$5 Incentive
INC 2=Babysitting & Transportation Incentive
INC 3=No financial Incentive

I

Based on a covariate model the posttest scores were adjusted to account for initial differences reflected in pretest scores.

TABLE 49

3 way MANCOVA on Brown IDS Self Concept Referents Test

(excluding Center 1)
(N = 102)

	F Ratio	d f	Level of Probability
Center within Incentive X attendance Interaction	1.02	4 & 178	.3960
Incentive X Attendance Interaction	3.45	4 & 178	.0097
Center effects	.19	4 & 178	.9433
Attendance effects	2.11	2 & 89	.1274
Incentive effects	5.86	4 & 178	.0002

Univariates Contributing to Significant Interaction

	F Ratio	d f	Level of Probability
Post Self	4.0359	2 & 90	.0210
Post Mother	4.3458	2 & 90	.0158

A parallel three-way multivariate analysis of covariance was done excluding Center 1. Again a significant two-way interaction between incentive and attendance was revealed. In this analysis, as illustrated in Table 4.9, both the mother and self univariates contributed to the multivariate significance.

Figure 4. 4
INTERACTION INCENTIVE X ATTENDANCE

Brown Self Concept Referents Test Using Adjusted Cell Means
(excluding center 1)

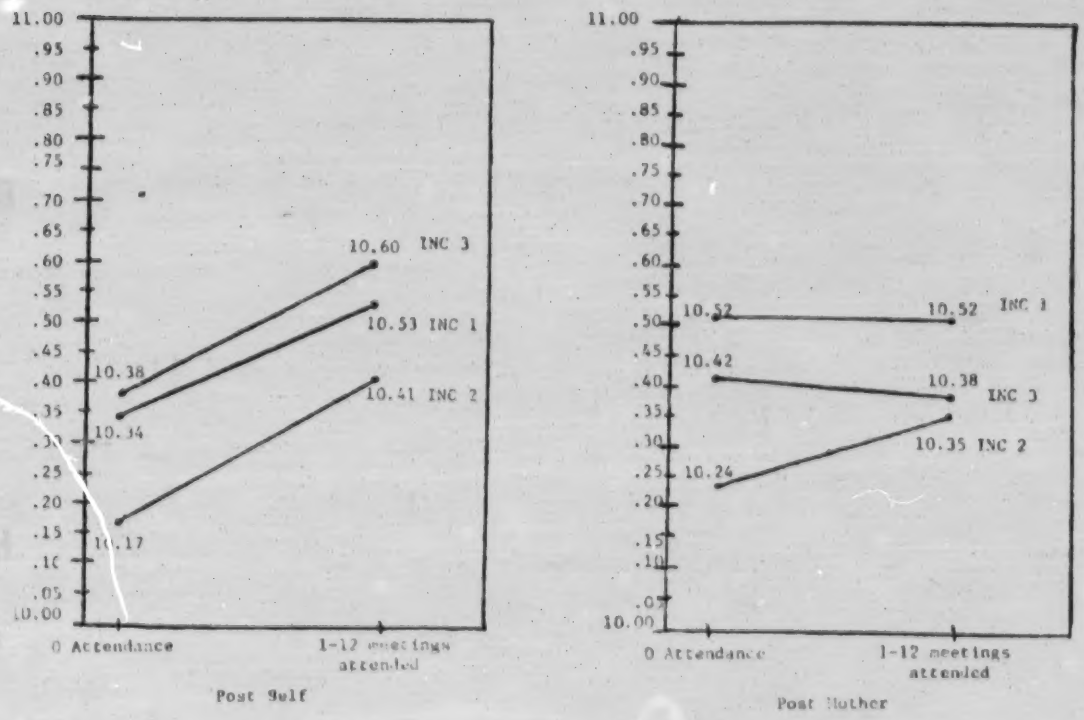


Figure 4.4 illustrates the interaction. For the post self scores in all incentive groups, the children of parents who attended had higher scores than the children of non-attenders, but the magnitude of the difference varied from one incentive to another.

In comparing the unadjusted mean scores in Table 4.10, in all incentive groups the post mother and post self scores for those who attended were higher than for those who did not attend. Within the $5 incentive (Incentive 1) mean scores decreased from pre to posttesting. Within the B-T group (Incentive 2) and the "no incentive" groups, (Incentive 3) mean scores increased from pre to posttestings.

TABLE 4.10
Mean Scores on the Brown Self Concept Referent Test (excluding Center 1)

	Number of meetings attended	Pre Self	Post Self	Pre Mother	Post Mother	N
INC 1	0	10.429	4.714	11.857	4.714	7
	1-12	11.850	10.000	11.850	9.950	20
INC 2	0	10.533	11.200	10.133	11.666	15
	1-12	11.419	12.032	10.834	11.677	31
INC 3	0	11.329	11.832	11.2218	11.611	18
	1-12	11.636	12.091	11.000	12.909	11

INC 1=$5 incentive
INC 2=Babysitting and transportation incentive
INC 3=No financial incentive

TABLE 4.11

Adjusted Cell Means on Brown Self Concept Referents Test[1]
(Excluding Center 1) (N = 102)

	Number of meetings attended	Post Self	Post Mother
INC 1	0	10.34800	10.52297
	1-12	10.53200	10.52184
INC 2	0	10.17246	10.24523
	1-12	10.41434	10.35808
INC 3	0	10.38977	10.42064
	1-12	10.60107	10.38491

[1] scores are adjusted to account for initial differences in the analysis of covariance model.
INC 1=$5 Incentive
INC 2=Babysitting and Transportation Incentive
INC 3=No financial incentive

These same results are illustrated in Table 4.11 in the form of adjusted post scores.

IV. Effect of Financial Incentives on Measures of Mother-Child Interaction

The secondary objective of ascertaining the effects of incentives on the quality of the mother-child interaction was investigated using a multivariate analysis of covariance with scores from the Hess-Shipman Toy Sorting Task as the dependent variables. Pretest scores were the covariates of posttest scores.

(See Appendix E for a description of these variables)

The initial analysis investigated differential performances based on center and incentive groupings. The total sample consists of mother-child dyads for which pre and posttest data were available on this instrument. Table 4.12 summarizes the results of the analysis. Significant center effects exist ($p \leq .0143$) along with the main effect of incentives. A group of five univariates out of the possible 20 contributed to this multivariate significance.

A parallel analysis shown in Table 4.13 was run to exclude Center 1, but significant center effects still exist ($p \leq .0220$) along with the main effect of incentives ($p \leq .0609$). The same univariates as in the original analysis contributed to the significant center effect.

TABLE 4.12

MANCOVA on Hess Shipman Toy Sorting Task on Total Families (N = 119)

	Test of main effects for incentives	Test of Center Differences nested within Incentives
F ratio	1.2039	1.5320
d f	40 and 148	60 and 221
level of probability	.2133	.0143

Univariates contributing to Center differences

Variable	F ratio	Level of Probability
reference to specific attributes	3.3936	.0212
questions physical	8.1241	.0001
unintelligible remarks from child	3.2939	.0240
range of maternal affectionateness	5.5951	.0015
child's ability to color sort	5.6644	.0014
	df = 3 and 93	

(See Appendix E for complete results)

TABLE 4.13

MANCOVA on Hess Shipman Toy Sorting Task on Total Families
(excluding Center 1)
(N = 93)

	Test of main effects for incentives	Test of Center Differences nested within Incentives
F ratio	1.4807	1.666
d f	40 and 98	40 and 98
level of probability	.0609	.0220

Univariates contributing to Center differences

Variable	F ratio	Level of Probability
reference to specific attributes	3.4194	.0385
commands physical	4.0764	.0213
commands verbal	6.0261	.0039
questions physical	11.3806	.0001
unintelligible remarks from child	4.8207	.0111
range of maternal affectionateness	6.7298	.0022

df = 2 and 68

A three-way multivariate analysis of covariance was implemented to test for interactions and main effects for center, incentives and attendance. Attendance was based on any attendance vs. no attendance. Table 4.14 revealed that although no interaction occurred, a significant center effect ($p < .0289$) exists along with the main effects.

TABLE 4.14
3 Way MANCOVA On Hess Shipman Toy Sorting Task
(N=105)

	F ratio	df	level of Probability
Center nested within incentive X attendance interaction	1.0080	60 and 162	.4721
Incentive X attendance interaction	.9003	40 and 108	.6393
Center effects	1.4750	60 and 162	.0289
Attendance effect	.6525	20 and 54	.8529
Incentive effect	1.4543	40 and 108	.0663

Univariates Contributing to Center Differences (df = 3 and 73)

Variable	Univariate F	Level of Probability
reference to specific attributes	3.3121	.0247
verbal neg. reinforcement	3.0563	.0337
commands verbal	5.0708	.0031
questions physical	7.8700	.0002
unintelligible	3.3686	.0231
range maternal behavior	4.7964	.0042
fully explains color sort	3.5264	.0191

TABLE 4.15
3 Way MANCOVA on Ness Shipman Toy Sorting Task
(N = 93) (excluding Center 1)

	F ratio	df	Level of Probability
Center nested within Incentive X attendance Interaction	1.3696	40and 88	.1120
Incentive X Attendance Interaction	.7375	40 and 88	.8572
Center Effects	1.9049	40 and 88	.0064
Attendance Effects	1.1504	20and 44	.3390
Incentive Effects	1.3940	40 and 88	.0697

Univariates Contributing to Center Differences

Variable	Univariate F	Level of Probability
Reference to Specific Attributes	4.3950	.0164
Verbal Negative Reinforcement	5.4327	.0067
Commands Physical	4.0153	.0228
Commands Verbal	5.4136	.0068
Questions Physical	9.5801	.0002
Unintelligible	5.0954	.0090
Child's Cooperation	3.2413	.0459
Range Maternal Behavior	5.8147	.0048

(df=2 & 93)

Seven univariates contributed to this significance. A parallel analysis excluding Center 1 was done - with very similar results. As Table 4.15 illustrates, a significant center effect ($p \leq .0064$) still existed, with eight univariates contributing primarily to the significance. Results of post hoc Scheffé contrasts revealed that the centers contributing to the effects varied.

Further analyses will be required to adequately explore the association between the various variables and the demographic characteristics of the subsamples.

V. Demographic Characteristics and Attendance Patterns

Finding that differential attendance patterns existed relating to financial incentives, it seemed useful to further describe the attenders and non-attenders within the incentive conditions with regard to certain characteristics of the children and of the mothers and families. The following descriptive data may be deemed useful in the interpretation of the analytical results.

The families comprising the clientele of the day care centers in this study were described in Chapter III with regard to demographic characteristics. These included certain child variables: age of child, ordinal position in family, sex, race, attendance patterns; as well as family variables: parent's marital status, maternal employment and education, number of children in family, etc. The external validity of the main results of the significant positive effect of incentives on parent attendance at the PTT Program may be further enhanced by examining the attendance patterns according to the previously documented demographic descriptions. Consequently the centers were each divided into two groups - families with mothers who had attended the PTT Program and families in which mothers had not attended. The salient demographic characteristics are shown again as they describe the attenders' and non-attenders' families. In many cases chi square and other analyses were done to examine possible differences. However, since the unusual circumstances surrounding the change in PTT teacher in Center 1 seemed to confound previous

results, this center was omitted from further analysis. The data for incentive 1 are contributed only by Center 3, and for this reason, should be regarded with caution.

TABLE 4.16

Initiation of Attendance at Day Care Center

	Mothers Attended (N = 107)						Mothers Did Not Attend (N = 117)					
	Incentives						Incentives					
	1		2		3		1		2		3	
	N	%	N	%	N	%	N	%	N	%	N	%
Date child started at center												
after PTT	0	0	4	8	2	8	6	27	4	11	7	12
within one mo. prior to PTT	8	28	4	8	4	16	2	9	2	6	3	5
2, 3 months prior to PTT	2	7	4	8	3	12	3	14	2	6	3	5
4-6 months prior to PTT	5	17	15	29	6	23	5	23	7	19	20	34
7-12 months prior to PTT	5	17	13	25	4	15	2	9	10	28	11	19
over 1 year prior to PTT	9	31	12	23	7	27	4	18	11	31	15	25

Table 4.16 shows all day care centers evidence a fairly large group of children starting attendance within four to six months prior to the PTT Program. Most of these children began in the month of September.

Both centers within incentive 1 accepted a comparatively large group of children after the PTT Program started. The parents of these children were eligible to attend the Program, but they were not included in the study and did not receive a financial incentive.

TABLE 4.17

Termination of Attendance at Day Care Center

(Relative to PTT Program)

	Mothers Attended (N = 106)						Mothers Did Not Attend (N = 115)					
	Incentives						Incentives					
	1		2		3		1		2		3	
	N	%	N	%	N	%	N	%	N	%	N	%
Date child terminated attendance												
did not terminate through posttesting	26	90	33	63	18	72	14	64	13	37	40	69
during posttesting	0	0	18	35	2	8	0	0	18	51	5	9
during PTT	3	10	1	2	5	20	2	9	3	9	9	16
before PTT, during or after pretesting	--		--		--		6	27	1	3	4	7

The large percentage of children terminating attendance during the posttesting period in centers 4 and 6 within incentive 2 (see Table 4.17) was influenced by two factors: Center 6 ceased operation when Model Cities' funds were terminated; Center 4 normally ceases to function during the summer. Any children who continue to need day care services in Center 4 are sent to an affiliated center.

TABLE 4.18

Sex of Day Care Children in Sample

	Mothers Attended (N = 107)						Mothers Did Not Attend (N = 119)					
	Incentives						Incentives					
	1		2		3		1		2		3	
	N	%	N	%	N	%	N	%	N	%	N	%
Sex												
male	16	55	24	46	17	65	10	44	13	36	26	43
female	13	45	28	54	9	35	13	57	23	64	34	57
			$\chi^2 = 6.473$ df = 5 not significant at $p < .05$									

A chi square analysis of the data of Table 4.18 showed no significant preference for mothers of male children or female children to attend the PTT Program.

TABLE 4.19

Number of Children by Age Groupings at Start of PTT Program

	Mothers Attended						Mothers Did Not Attend					
	N = 107						N = 119					
	Incentives						Incentives					
	1		2		3		1		2		3	
	N	%	N	%	N	%	N	%	N	%	N	%
Child's age												
under 36 mos.	2	7	2	4	2	8	1	4	0	0	2	3
36 - 47 mos.	5	17	17	33	7	27	7	30	12	33	16	27
48 - 59 mos.	7	24	17	33	6	23	3	13	11	31	22	37
60 mos. and over	15	52	16	31	11	42	12	52	13	36	20	33
			χ^2 = 12.902 df = 15 non significant at $p < .05$									

Table 4.19 presents the ages of children whose mothers attended and did not attend the PTT Program. There is no significant difference across incentives and attendance groups by age of child.

An overall chi square significant difference ($p < .005$) was found within racial categories across incentives and attendance groups as shown in Table 4.20.

Further investigation of the racial groups across incentives found only one significance - that of the white race across incentives. Post hoc analyses indicated that more parents of white children in the "no incentive" condition did not attend the PTT Program than would be expected. However, there was no significant trend for parents of black children and parents of children of other racial stock to either attend the parent program or not.

TABLE 4.20

Racial Composition of Day Care Children in Sample

	Mothers Attended (N = 107)						Mothers Did Not Attend (N = 119)					
	Incentives						Incentives					
	1		2		3		1		2		3	
	N	%	N	%	N	%	N	%	N	%	N	%
Race												
white	24	83	30	58	5	19	13	57	11	31	11	18
Negro	3	10	21	40	20	77	5	22	24	67	47	78
other[1]	2	7	1	2	1	4	5	22	1	3	2	3
			$\chi^2 = 49.256$ $p < .005$ $df = 10$									

[1]Includes mixed.

TABLE 4.21

Family Size[1]

	Mothers Attended						Mothers Did Not Attend					
	N = 93						N = 108					
	Incentives						Incentives					
	1		2		3		1		2		3	
	N	%	N	%	N	%	N	%	N	%	N	%
Number of children in family												
1	12	48	20	47	18	72	8	40	15	45	23	42
2	10	40	16	37	6	24	7	35	10	30	13	24
3	1	4	7	16	1	4	2	10	2	6	9	16
4 or more	2	8	0	0	0	0	3	15	6	18	10	18

[1] In order not to duplicate results when a family sent more than one child to the day care center, data was summarized for the youngest child only.

Within all centers there was a large percentage of children who were only children or oldest child in a small family (Table 4.21). Interestingly, those parents who had four or more children did not attend at all in the babysitting and transportation condition - and the babysitting was offered for ALL children in a family, not just for the child(ren) who attended the centers. Mothers of these larger families comprised 16% of those who attended in the monetary stipend condition, so apparently this incentive was more convenient for them than the babysitting and transportation. It may be, also, that parents would be reluctant to take all the children out at night, even when the other children were older than the day care center child.

Chi square analysis of the number of children in the first ordinal position in the family versus all other positions combined yielded marginal significance ($p < .10$) across incentives and attendance groups. Additional analyses within each of the three incentive treatments yielded significance only in the incentive 3 condition ($p < .005$). Post hoc analyses indicated that parents of more children in the first ordinal position attended than parents of children who were younger. (The chi square results were not placed within Table 4.22 because the data were grouped in a different manner than the tabular arrangement would indicate.)

TABLE 4.22

Child's Ordinal Position

	Mothers Attended						Mothers Did Not Attend					
	N = 105						N = 116					
	Incentives						Incentives					
	1		2		3		1		2		3	
	N	%	N	%	N	%	N	%	N	%	N	%
Child's Ordinal position												
1st	17	59	32	63	21	84	13	59	19	54	29	49
2nd	9	31	14	27	3	12	5	23	8	23	13	22
3rd	1	3	5	10	1	4	1	5	2	6	6	10
4th or younger	2	7	0	0	0	0	3	14	6	17	11	19

TABLE 4.23

Child's Average Attendance at Day Care Center

	Mothers Attended (N = 99)						Mothers Did Not Attend (N = 112)					
	Incentives						Incentives					
	1		2		3		1		2		3	
	N	%	N	%	N	%	N	%	N	%	N	%
Full time attendance (5 full days)	8	29	41	89	23	92	15	71	31	91	52	91
Part time attendance (less than 5 full days)	20	71	5	11	2	8	6	29	3	9	5	9
			$\chi^2 = 60.30$ df = 5			$p \leq .005$						

The total enrollment in Center 3 (incentive 1) contained slightly more children who attend day care on a part-time basis than children who attend full-time (5 full days a week). However, more than twice as many parents of part-time children than full-time children attended the PTT programs (Table 4.23).

There were few children who attended part-time in other centers within the other financial incentive as well as the "no incentive" condition. No trend was noticed in other centers for parents of part-time children to attend or not.

A chi square analysis showed overall statistical differences between the married parents, two parents together vs. the single parent categories across incentives and attendance groups (Table 4.24). Further analysis revealed significance ($p \leq .005$) within the married (two parents together) category, across incentives. More married people in incentive 3 (no financial incentive) did not attend than in incentives 1 and 2. However, no differences were evidenced within individual incentives or within the single parent category.

TABLE 4.24

Parent's Marital Status

	Mothers Attended (N = 94)						Mothers Did Not Attend (N = 107)					
	Incentives						Incentives					
	1		2		3		1		2		3	
	N	%	N	%	N	%	N	%	N	%	N	%
Married Two parents together	20	36	28	64	6	25	7	35	16	48	23	43
Single Parent[1]	16	64	16	36	19	75	13	65	17	52	31	57

$\chi^2 = 12.541$ $df = 5$ $p \leq .05$

An additional analysis of variance was implemented, using attendance as the dependent variable (any attendance vs. no attendance at the PTT Program). The independent variable was the marital status (married vs. single parent) as defined in Table 4.24. The main effect was not significant at ($p \leq .1153$). The married parent averaged 2.53 meetings (S.D. = 3.62) while the single parent averaged 1.84 meetings (S.D. = 3.16).

TABLE 4.25

Families Receiving Aid for Dependent Children

	Mothers Attended (N = 93)						Mothers Did Not Attend (N = 108)					
	Incentives						Incentives					
	1		2		3		1		2		3	
	N	%	N	%	N	%	N	%	N	%	N	%
Family receives ADC	10	40	5	12	15	60	13	65	5	15	40	73
Family does not receive ADC	15	60	38	88	10	40	7	35	28	85	15	27
			$\chi^2 = 54.249$ $p \leq .005$ $df = 5$									

An overall significant difference ($p \leq .005$) in attendance patterns based on ADC categories was noted in Table 4.25. That is, more parents who do not receive ADC attended the parent program than ADC parents.

Center 6 (incentive 2) was unique in this study because although Federally licensed it did not contain any ADC mothers. The five mothers receiving ADC who attended within the babysitting and transportation incentive were all from Center 4. The other five ADC mothers at that center did not attend. No statistically significant pattern of attendance was noted within the "no incentive" condition.

To further study these attendance patterns, an analysis of variance was run using families divided into ADC recipients or non-recipients as the independent variable and attend PTT or not as the dependent variable. A significant main effect ($p \leq .0006$) was found. Non-ADC recipients averaged 2.88 meetings with a S.D. of 3.83 as compared to ADC recipients who averaged fewer (1.41) meetings attended with a S.D. of 2.69.

TABLE 4.26

Maternal Employment

	Mothers Attended						Mothers Did Not Attend					
	N = 93						N = 107					
	Incentives						Incentives					
	1		2		3		1		2		3	
	N	%	N	%	N	%	N	%	N	%	N	%
Employment status												
working	22	88	32	74	20	80	13	65	26	81	40	73
not working	3	12	11	26	5	20	7	35	6	19	15	27
			χ^2 = .63 df = 5 not significant at p < .05									

Chi square analysis of the PTT attendance of working vs. non-working mothers did not indicate significant differences (see Table 4.26). Non-working mothers did not attend more than working mothers.

There is no significant difference between attendance patterns of women in professional and managerial occupations and women in other types of work (Table 4.27). However, numerically more women in the professional and managerial level (23) attended than not (16). In incentive 1, six out of seven possible professional/managerial women attended.

TABLE 4.27

Maternal Occupational Type

	Mothers Attended						Mothers Did Not Attend					
	N = 47						N = 74					
	Incentives						Incentives					
	1		2		3		1		2		3	
	N	%	N	%	N	%	N	%	N	%	N	%
Working:												
professional or managerial occupation	6	55	11	39	6	60	1	8	11	42	4	11
other type of work	5	45	16	61	3	40	11	92	15	58	32	89
			$\chi^2 = 10.394$ df = 5 not significant at $p \leq .05$									

There is an overall statistical difference between mothers who are currently students and those who are not across incentives and attendance groupings (Table 4.28). Further chi square analyses reveal significance within incentive 1 ($p = .01$). There are an equal number of students and non-students who did not attend the PTT Program, but non-students outnumber students 4 to 1 in the attended category. Looking at the same data another way (across incentives but within the student and non-student groups) revealed significance at ($p = .001$) in the non-student category. Post hoc analysis shows more non-students did not attend in incentive 3 (no incentive) than in incentives 1 or 2.

TABLE 4.28

Maternal Student Status

	Mothers Attended						Mothers Did Not Attend					
	N = 90						N = 97					
	Incentives						Incentives					
	1		2		3		1		2		3	
	N	%	N	%	N	%	N	%	N	%	N	%
Student status:												
student	4	16	7	17	14	58	9	50	6	21	20	40
not student	21	84	34	83	10	42	9	50	23	79	30	60
			χ^2 = 20.613 p < .005 df = 5									

TABLE 4.29

Mother's Terminal Education

	Mothers Attended						Mothers Did Not Attend					
	N = 91						N = 101					
	Incentives						Incentives					
	1		2		3		1		2		3	
	N	%	N	%	N	%	N	%	N	%	N	%
Terminal education												
ED 1												
A. did not finish high school	0	0	3	7	2	8	2	12	6	19	13	25
B. finished high school	12	48	10	24	4	16	7	41	4	13	21	40
ED 2												
C. some occupational or professional training	4	16	8	20	0	0	1	6	7	23	6	11
D. some college	6	24	10	24	17	68	7	41	6	19	11	21
ED 3												
E. finish college or beyond college	3	12	10	24	2	8	0	0	8	26	2	4
			$\chi^2 = 29.366$ df = 10			$p < .005$						

When mothers are divided into three educational levels as indicated in Table 4.29, a significant difference is evidenced in a chi square analysis across all incentives and attendance groupings at ($p \leq .005$). Further analyses within each incentive grouping showed significance in incentive 3 ($p \leq .005$). Post hoc contrasts show the significance to be between educational levels 1 and 2; that is, more mothers who finished high school or less did not attend than mothers at the higher level with professional or occupational training or some college work.

When a chi square analysis of the educational levels was implemented seeking attendance differences across incentive groupings, significance at ($p \leq .005$) was found in the first level, high school or less education. Post hoc analysis within this level indicated that more mothers with high school or less education in incentive 3 did not attend than mothers within incentives 1 and 2.

An analysis of variance using five categories of terminal education (A through E in Table 4.29) did not achieve significance with ($p = .1247$). The average attendance of all women in each educational grouping was as follows:

Terminal education	Average # PTT meetings attended	S.D.
A - did not finish high school	1.03	2.39
B - finished high school	2.40	3.78
C - some occupational or professional training	3.09	4.12
D - some college	2.20	3.05
E - finish college or beyond	3.00	3.73

Summary

The research investigated two major questions: (1) Do financial incentives affect attendance at a parent education program at day care centers? (2) Do the incentive-motivated parent education programs effect a change in the mother-child interaction in a teaching situation as well as affect a measure of child self-esteem?

The data clearly indicate significantly more attendance at the PTT Program in the financial incentive conditions (Incentives 1 and 2) than in the no incentive condition (Incentive 3). Also, more attendance was initiated as well as maintained by the $5 incentive than the babysitting and transportation incentive, and by the babysitting and transportation incentive than the no incentive condition.

Secondly, there was a significant positive change in child self-concept as measured by the self-referent of the Brown IDS Self Concept Test for the children whose mothers attended compared to the children whose mothers had not attended.

The results of the mother-child interaction measure, the Toy Sort Task developed by Hess and Shipman, were mixed and not conclusively indicative of specific results due to the incentive-motivated program.

Additional analyses examined mother, child and family variables describing the attenders and the non-attenders in the three incentive conditions.

Age or sex of youngest child at the day care center was not a significant factor differentiating those who attended from those who did not attend. Within racial groups a larger number of Caucasian mothers attended meetings in the incentive condition than in the no incentive condition. There was not a significant difference in attendance based on incentive conditions for other racial groups.

There were significantly fewer ADC mothers in attendance than non-ADC. Mothers of two-parent families attended the meetings in the financial incentive conditions more than in the no incentive condition.

Non-working mothers did not attend meetings more frequently than working mothers, with or without financial incentives. Women in professional or managerial occupations attended more meetings across incenti conditions. Also, highly educated women attended more frequently than the less educated ones in all incentive conditions. Consistent with this finding, student mothers' attendance was independent of the type of incentive offered. However, among non-students, greater attendance was observed in the financial incentive conditions.

CHAPTER V

DISCUSSION

According to a recent census, over 46 percent of all American women today are employed outside the home. A growing number of these women and their families are turning to day care programs for assistance in caring for their children. Programs are needed that will have broad influences on the quality of life for American families, particularly programs which "strengthen the parenting capabilities of families and enrich the educational environments offered by, or available to, families (Emlen, 1973)." A variety of parent programs connected with preschool projects of various types have had mixed success in enlisting parent participation, (Badger, 1969; Levenstein, 1973; Gordon, 1972). Increasing parental participation with the child care organization is indeed a major problem. One method which might be examined is to offer incentives for parental participation; the research reported here had as its major goal to examine the effect of financial incentives on the amount of the day care mother's involvement in an organized parent program. A second related goal was to examine changes in the quality of mother-child interaction and self-esteem of the children over the period of the incentive-motivated parent program.

Incentives for participation in the parent education program (PTT) meetings

Analysis of the results in the day care centers participating in the study clearly indicates that families receiving an incentive not only initiated a greater amount of parental involvement in the day

care program through attendance at the parent education program (PTT), but also maintained more participation compared to those families receiving no incentives (see previous Figure 4.2). Of particular interest is the pattern of those who maintained attendance, (attended four to twelve meetings), compared to those who initiated attendance but did not maintain attendance (attended between one and three meetings). The results show ten percent of families maintaining attendance in the no-incentive condition, twenty-nine percent maintaining in the babysitting and transportation (B-T) incentive, and forty-six percent of all families maintaining in the five dollar stipend condition (Figure 4.2)

A recent article dealing with research on the level of parental involvement in early childhood programs mentioned several factors affecting participation (Bauch et al., 1973). The disparity between availability and utilization of services such as babysitting and transportation was cited as a factor limiting participation. The utilization of the two financial incentives in this study differs somewhat, and can be described as follows:

Patterns of utilization of the two financial incentives

Tables 5.1 and 5.2 present utilization rates of the two incentives in this research.

In the $5 incentive condition, each mother (family) in attendance received the stipend automatically for attending. However, in the B-T incentive condition it was necessary for those desiring babysitting to bring the children to the centers during the evening hours.

TABLE 5.1

Use of Babysitting and Transportation Incentive[1]

Average number per meeting	Centers	
	4	6
Babysitting (number of children)	15.0	5.0
Transportation	2.0	0.0

[1]Optional at each meeting.

TABLE 5.2

Average Number of Mothers Receiving $5 Incentive[1]

Average number per meeting	Centers	
	1	3
$5 Incentive	1.5	4.0

[1]Each mother (family) in attendance received $5 per meeting; sometimes more than one family member attended.

Transportation for mother (and/or father and children) was available on request. Table 5.1 shows that transportation was not a utilized incentive in this study (Center 6 did not utilize the optional transportation). At the beginning of the PTT Program, when it became evident that families were not using this part of Incentive 2, an investigation was made to be sure similar communication about transportation's availability was used in both centers. The investigation showed that lack of communication was not the source of non-utilization of this service.

For Center 6 a more likely explanation is that the parent program met on the same weeknight and at about the same time that another regular monthly meeting had been held. Since most of the parents who attended the PTT Program were the same people who had attended the monthly sessions, these parents were undoubtedly accustomed to providing their own transportation, and found it of no interest to begin a different pattern. On the other hand, parents attending at Center 4 did use the transportation incentive, although sparingly. In most cases the same two parents used the transportation. "Babysitting" was much more popular in both centers with an average of fifteen children involved per meeting at Center 4 and five children involved per meeting at Center 6.

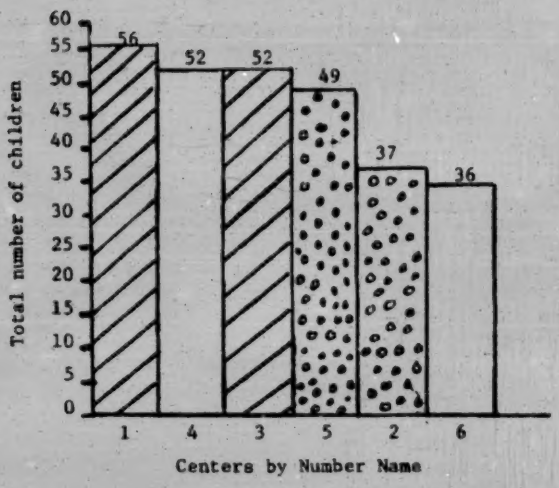
Day care center size, incentives and parental attendance at PTT Program

If one predicates that smaller center size is conducive to greater parental participation, as do Bauch et al., (1973) then Centers 2 and 6 should evidence more participation than the other, larger centers

(see Figure 5.1). However, where Center 2 shows 11% of its parents attending 4-12 meetings (categorized as maintaining attendance in Table 4.4), this is only 3% more than the other, larger Center 5. Center 6 lags far behind the other larger center with about half its percentage of attendance (18% as compared to 39%).

FIGURE 5.1

Center Rankings by Size[1]



[1]includes part- and full-time children enrolled at start of PTT Program.

In the category of initiating attendance, the two smallest centers have the largest percent attendance, 28% and 29%. However, Center 4, in the same incentive category as Center 6, has 25% attendance for 1-3 meetings. Center 5 has only 16% attendance as compared to the 28% of Center 2 in the "no incentive" condition. This may, indeed, be appropriately attributed to center size.

It may be concluded that only the data in the "no incentive" condition support the hypothesis that smaller centers attract larger parent participation, and this seems true only where a few meetings are involved, perhaps three meetings or less. It does not appear true when one compares attendance involving a longer series of meetings.

If one looks at the data of this study and uses them to compare the effect of supportive services - in small centers - one may compare the data from Centers 2 and 6. In the short run, that is, comparing attendance at one to three meetings, there is no evidence to predict that the availability of babysitting and transportation service influences greater attendance. However, since availability and utilization of services are two different factors as Bauch et al. (1973) reasonably note, one may hypothesize that the greater utilization of supportive services in larger Center 4 within the B-T incentive group offsets the advantage that a smaller center has. In the long run, comparing attendance for four or more meetings, the availability of babysitting and

transportation may affect outcomes. In this case, the Center 6 offering such services obtained an 18% turnout as compared to an 11% turnout in the "no incentive" Center 2.

TABLE 5.3

Percent of People Initiating and Maintaining Attendance by Incentive vs. No Incentive (excluding Center 1)

Number of Meetings Attended	Incentive Provided	No Incentive Provided
0	45	69
1-3	18	21
4-12	38	10

Perhaps the most general observation that may be drawn from this analysis is that MAINTAINING attendance is a function of providing parents with an incentive regardless of day care center size.

Incentives, PTT attendance, and family structure variables:

1. Intactness: There were significant differences in attendance ($p = .05$) between single parent families and intact two-parent families. More mothers in two-parent families attended in the financial incentive conditions than in the no incentive condition. This finding is consistent with the Hess, et al. (1969) study in which mothers in father-present families interacted more with the community than mothers in father-absent families. In that study within the working class families, 25% mothers in father-present families formally participated in school groups compared to only 14.6% mothers in father-absent families.

2. Birth order of child in sample: When attendance of mothers of oldest children was compared to attendance of mothers of the sample child who was not the oldest, there were marginally significant differences across incentives and attendance groups. The significance lay within the "no incentive" condition in which the mothers of oldest children were most likely to attend the PTT Programs. However, when incentives were provided in addition to the program, mothers of younger children attend in larger numbers.

3. Sex of child in sample: There was no evidence to suggest that sex of child is a determining factor in maternal attendance at the PTT Program. This is not inconsistent with the Hess (1969) results which also found little evidence that maternal behavior is related to sex of child.

Incentives, PTT attendance and family environmental variables:

1. SES as indicated by level of mother's education: Significant differences were found across incentives and attendance groupings. More mothers with occupational or professional training or some college attended than mothers whose terminal education was at most a high school degree. This finding is not unexpected. However, an encouraging further finding was noted. The attendance of the mothers with high school or less education was significantly greater in the financial incentive conditions than in the no incentive condition. This argues for the value of the incentives to encourage attendance by mothers who would not otherwise attend.
2. Kind of employment: Numerically more women in professional or managerial types of work attended than stayed home across all incentive conditions. This was not true for women in other types of work.

3. Student status of mothers: Without a financial incentive, more students attended than non-students. But when offered the $5 incentive, more non-students attended than students. This is indeed another possibility of the drawing power of financial incentive to reach available people who need motivation.

4. ADC families: The study found significantly more attendance of non-ADC mothers. Because this variable was considered a highly important one, (Hess, et al. 1969) further examinations of change in child self-esteem and mother-child interaction for ADC and non-ADC families were investigated.

The Toy Sort Task was used in the Hess study, but also a more difficult block sorting task was discussed in the analysis. Our study, dealing with children of both younger and older ages than those in the Hess-Shipman study, used the simpler Toy Sort Task.

The Hess, et al. (1969) report compared the results from father-presence vs. father-absence (ADC) families. Our data are comparable but not identical. Our definition of married mother would include a woman living with an adult male, irregardless of legal status. The single parent would be defined as one living alone, again irregardless of legal status.

The Hess study found significant differences ($p \leq .05$) in these areas of interest to us:

1. Mother's out of home activities: We found significantly fewer ADC mothers attended than non-ADC mothers.
2. Specificity index - Block Sort: We found that the scores of the non-ADC children improved on a measure of the child's ability to color sort. (See Appendix E)
3. Lower confidence factor for ADC children (Binet): We found no difference on the Brown IDS Self Concept Referents scores (See Appendix E).
4. Crowding in home as measured by total number of children in family: The Hess study found crowding (which they operationalized as total number of people in home and ratio of rooms to people) related inversely to social status. In the present data, one out of 20 mothers who had more than two children attended the PTT Program in the no incentive condition. When incentives were offered, 10 out of 23 mothers with more than two children attended the PTT Program; again a point in favor of incentives.

The effect of incentives for attending the parent education program (PTT) on mother-child interaction and child self-esteem

One way to investigate the effect of incentives on parents is to look only at the results of the Brown IDS Self-Concept

Referents Test and of the Hess-Shipman Toy Sorting Task from those families in which a parent had attended the PTT Program and consider these separately from the results in a family in which no attendance had occurred. However, there are two objections to this. The first objection is that there was not an equal utilization of incentives (See Tables 5.1 and 5.2). Some parents in the B-T incentive condition attended without ever using the babysitting or the transportation, while all mothers who attended in the $5 stipend condition automatically received the money each time. Another objection is that the centers, as a unit, were randomly assigned to receive the various incentives. If we then look at only those individuals within the centers who opt to use the incentives we are thereby introducing a bias into our results by modifying the random condition. There is ample reason to expect that a "Hawthorne Effect" will cause the effect of the incentives to be felt by all families, not just those who choose to participate in the PTT Program. Consequently the total families for whom pre- and post-data were available were initially analyzed for incentive effects, although there were some families in each center for whom pre- and post-data were not available. A subsequent analysis was implemented (only after the main incentive effects had been documented) in which mothers were divided into those who attended and those who had not attended, as part of a three-way multivariate analysis of variance.

Effects on child self-esteem:

The first analysis comparing all families within the centers assigned to the three incentive conditions for whom pre- and post-data were available evidenced a main effect for incentives both with and without Center 1 (Tables 4.5 and 4.6). The subsequent three-way analysis of the Brown scores with independent variables of incentive, center and attendance also produced incentive effects (Tables 4.8 and 4.9). Of more interest was the interaction between incentive and attendance when the analysis excluded Center 1 (the center in which very unusual circumstances surrounding the PTT teacher leaving suddenly and being replaced caused this center to be viewed with suspicion) as shown in Figure 4.4. Clearly, child self-concept is higher at the end of the PTT program for children whose parents attended the program than for children whose parents did not attend. This finding confirms the results of an earlier study implementing the PTT Program (Boger, Kuipers, Beery, 1969).

This earlier research found significant positive change on the self-referent scores after the PTT Program. These earlier data, however, were drawn from a sample of 72 Ss, primarily white, rural four-year-olds, while the current data involved 121 children racially half Caucasian and half black, and all urban.

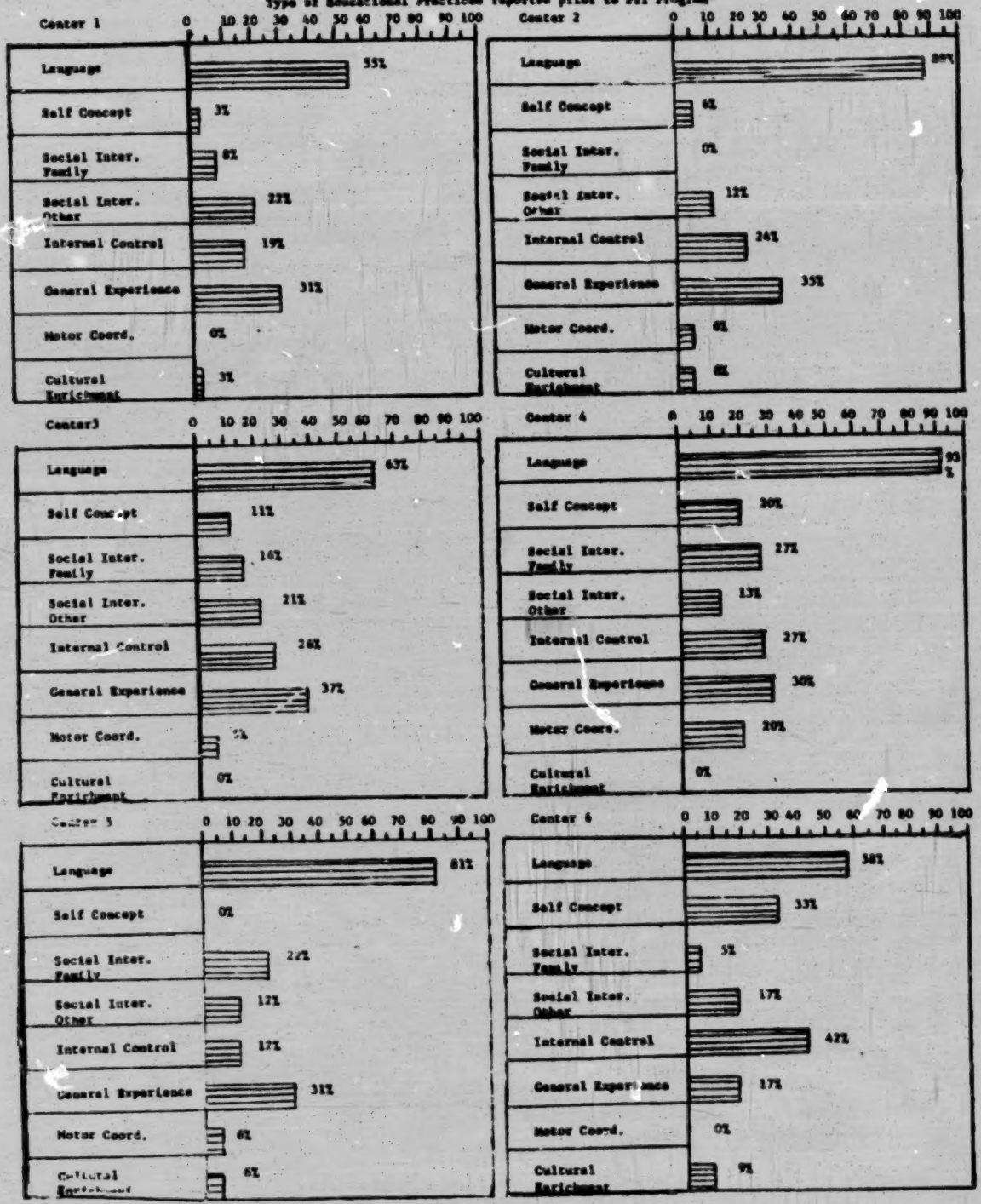
The earlier study also found Head Start eligible children evidence a more positive self-concept when mothers work

with them using specific materials in the home. Disadvantaged children attain the same level of positive self-concept as advantaged children when mothers work with them. But, when no specific interaction with the mother (occurs), non-Head Start eligible (children's) self-concept is more positive than Head Start eligible (children's)" (Boger, Kuipers, Beery, 1969; p. 99).

The same phenomenon of positive change in the self-referent was evidenced in the current study. However, the greatest positive change was evidenced in children whose mothers had no financial incentive to attend the PTT Program. One might guess that the small number of women who attended the Program without a financial incentive were indeed highly intrinsically motivated and may well have worked more at home with their children. This, in turn, provides increased pleasant interaction with the child, who responds by achieving greater self-esteem. This same phenomenon also occurred among the children of attenders in the babysitting and transportation incentive and the $5 incentive.

Curiously, the scores of the children of non-attenders in the $5 condition (one day care center) were lower at the end of the Program than before it. Investigation of these results found that the low scores were attained by a small group of children tested on the same day by the

Figure 5.2
Type of Educational Practices reported prior to PET Program[1]



[1]Percentage of mothers reporting practice, classified by categories
Data available for 34% of sample.

same (experienced) tester. About seven children gave negative responses to all 14 items, and therefore the average score for the non-attenders was lowered. However, there was no reason to doubt the reliability of the test administration and so the data were not deleted from the results.

Maternal educational practices, changes in child self-esteem, PTT attendance and incentives

Prior to the PTT Program, mothers were asked to respond to a question about their educational practices. The question was worded:

> Are there any particular things that you are doing with your child (youngest child attending the day care center) that you think may help him when he gets to school?[1]

This open-ended question was later coded according to the type of responses given by parents. Figure 5.2 presents the responses. The percents given are percentage of respondents indicating a specific practice. Consequently, the 66% response noted for an educational practice related to LANGUAGE means that 66% of all mothers who mentioned any educational practice (who answered the question at all) mentioned a practice relating to language development in the child.

[1]Question 8, Educational Survey, Appendix A.

Of particular interest are the responses relating to SELF-CONCEPT and to SOCIAL INTERACTION WITH FAMILY. Those mothers who reported some practice relating to mother-child interaction had the practice coded in the latter category. One may reasonably infer that initial practices relating to child self-concept and to mother-child interaction may relate in some systematic way to the child's pre score on the BROWN IDS Self Concept Referents Test.

If one rank orders the child care centers for mentioning a practice relating to the child's self-concept the ordering would show this:

Rank order of centers mentioning self-concept of child

centers	percent mentioning practice
6	33
4	20
3	11
2	6
(1)	(3)
5	0

Omitting the data from Center 1 because of the unusual circumstances surrounding the PTT program there, one sees that the rank order corresponds exactly to the incentive groupings:

Incentives	Centers
2	6,4
1	3
3	2,5

No knowledge of this correspondence of concern with child self-concept was available at the time of center assignment to incentive groupings. It was first noted in conjunction with post hoc examination of the Brown scores. However, this pattern bears an interesting relationship to the graph of the interaction between attendance and incentive on the Brown self score for self-concept. A ranking of the incentives based on children's self score for non-attenders (Figure 4.4) shows the exact opposite rank order as above. Since the children attending centers assigned to incentive 2 had parents most concerned about their self-concept at the inception of the PTT Program, one might wonder why these mother-child dyads might not profit the most from the program. In a sense, however, they did, as the largest difference between scores of children whose parents were attenders and scores of children whose parents didn't attend occurred in these centers. One might say that the initially sensitized parents gained most in the incentive situation. On the other hand, the fact that mothers in incentive 3 were initially least concerned about their children's self-concept insofar as they mentioned

home practices relating to that factor - these mothers apparently gained just as much from the program in an area in which they were not initially sensitized. The children of attenders were almost equally superior at the end of the PTT Program to the children of non-attenders as was the situation in incentive 2.

It is less clear that initial concern of mothers about social interaction with family members should be reflected in the child's perception of how his mother sees him. However, one could postulate that if a mother is concerned about how she relates to her child, she will try to make her interactions with him pleasant and reinforcing to him. Consequently, a child may increase in his positive view of how his mother sees him if his mother is skillful at this.

The initial assessment of educational practices found 36% of the combined responses of mothers within incentive 2 mentioning practices relating to social interaction with family members (Figure 5.2). As with self-concept, the mothers in these centers seem sensitized to the possibilities of helping the children in this social area. Only the children in this incentive category (incentive 2) showed posttest progress when their mothers had attended over the progress of children whose mothers did not attend (see Figure 4.4). There was considerably less sensitivity to mother-child interaction as an area which can be systematically reinforced within incentive 1 and incentive 3, 6% and 14% respectively.

However, since scores went down slightly for attenders in incentive 3 and stayed the same in incentive 1, one might postulate that the attending parents may have spent more time on the clearly cognitive aspects of the PTT program rather than on the affective aspects of mother-child interaction.

The cognitive interaction unreasonably affects the self-referent as evidenced in Figure 4.4. This is plausible as the Brown test does appear to be sensitive to cognitive abilities, especially for the youngest children (Shipman and Gilbert, 1972).

Effects on mother-child interaction:

The analyses of change in mother-child interaction found only marginal incentive effects across the 3 incentive conditions. However, main effects due to center differences were significant in each instance. These center differences did not show clear trends and are deemed inconclusive. Complete results are available in Appendix E.

CHAPTER VI

SUMMARY AND CONCLUSIONS

The presentation of the "Parents are Teachers Too" Program in conjunction with systematically varied financial incentives as well as without such incentives was designed to examine the effectiveness of incentives to motivate the day care mother's attendance at parent education programs. The project was implemented in the hope of encouraging parent-center cooperation. A related objective was to examine measures of child self-esteem and mother-child interaction before and after the 12-session program spanning over a period of three months. It was assumed that the incentives would motivate interest in the parent program which in turn would increase positive parent-child interaction around a variety of topics. This mutually reinforcing behavior could enhance the child's perception of his mother's positive view of him and his own self-esteem.

The major goals of the study were, therefore: (1) to determine if the use of financial incentives is an effective method of initiating and maintaining the day care mother's involvement in a parent education program; and (2) to determine if the use of financial incentives influences the quality of mother-child interaction and the child's self-concept.

The PTT Program was offered at six day care centers in different urban cities in Michigan under three conditions. The two centers offering the Program under Incentive 1 provided five dollars to mothers for each two-hour meeting attended. Two centers under Incentive 2 offered babysitting and transportation in conjunction with the Program. The third incentive condition labeled Incentive 3 offered no financial incentive for attendance at the parent program. The six centers were randomly assigned to the three treatment conditions.

The sample consisted of 202 preschool children and their mothers. It included equal numbers of families receiving ADC and families that did not, and equal numbers of boys and girls. The ratio of black to Caucasian children over the entire sample was three to two.

The dismissal of the teacher-director at one of the two day care centers randomly assigned the $5 incentive confounded the experimental conditions. As a result of this, the report includes analyses with and without the data from Center 1.

The following conclusions are based on the analyses excluding data from Center 1 and evidencing statistical significance at a probability level of ($p \leq .05$).

Attendance based on incentive conditions

1. Significantly more mothers attended the PTT with a financial incentive than without one.
2. The attendance was greater under the $5 incentive

condition than in the babysitting and transportation incentive condition.

3. More mothers maintained attendance for four or more meetings in the $5 incentive condition than in the babysitting and transportation incentive condition.
4. More mothers maintained attendance for four or more meetings in the babysitting and transportation incentive condition than in the no financial incentive condition.

Availability of Parent Education Program and change in child's self-esteem

Change scores on both the self and mother referent of the Brown IDS Self-Concept Referents Test indicated the following:

1. Children in centers assigned no financial incentives evidenced greater positive change than children in centers assigned financial incentives.
2. Greater positive change was evidenced in the children in the centers offering babysitting and transportation than for the center offering the $5 incentive.
3. Comparisons of the scores of children whose mothers attended vs. the scores for those mothers who did not attend yields an interaction effect of incentive x attendance. However, across all incentives, higher

scores on the self referent were achieved by children of attenders. Results on the mother referent were inconclusive.

Availability of Parent Education Program and change in Mother-Child Interaction

Twenty subscores of the Hess and Shipman Toy Sort Task were analyzed for main effects and for interactions of incentives, attendance, and centers.

1. Results of the analyses on the mother-child interaction measure were inconclusive because of center variation. Therefore, patterns of change in mother-child interaction were not evident in any of the incentive conditions.
2. No significant changes on mother-child interaction measures were evidenced based on incentive or on attendance.

Summary of Conclusions Based upon these Data:

1. Age of child: does not predict attendance of mother.
2. Sex of child: no significant difference in parental attendance could be predicted by sex of child.
3. Race of child: with no incentives present, no differences are evident in parental attendance. When incentives are present, however, higher attendance is shown by white parents.

4. Number of children in family: does not predict differences in attendance for families of 1 to 3 children. There is a slight tendency in families of 4 or more children for parents not to attend, even when babysitting for all children is available.
5. Child's ordinal position: when no incentives are present parents whose oldest child is in day care attend more frequently than parents whose younger children are involved.
6. Child attendance (full or part-time): when incentives are provided parents of part-time children attend more than parents of full-time children.
7. Families receiving ADC: this study would predict more families that do not receive ADC would attend parent programs.
8. Working mothers: whether the mother works or not does not predict differing attendance in this study.
9. Mother's occupation: this dimension provides no basis for predicting attendance.
10. Mother's educational level: mothers of high school or less education do not attend as much as more educated mothers. However, with incentives, more mothers of this educational level attend than with no incentives.

11. Maternal student status: non-student mothers attend more frequently than student mothers under incentive conditions but do not attend more than student mothers when no incentives are offered.

12. Family status: a greater percentage of non-attenders are from single-parent families regardless of incentive condition. Two-parent families are more likely not to attend when when no incentives are provided.

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APPENDIX A

Instrumental References

The Brown IDS Self-Concept Referents Test

Bert R. Brown
New York Medical College

Instructions to Subjects and Administration Procedures

Prior to photographing S the following standard instruction should be given by E:

> "Well now, we're going to take a picture of you. Get ready... when I count to three I'll snap your picture. Are you ready now? 1, 2, 3..."

(Notice that no instruction to "smile" etc. has been included. This is purposefully left ambiguous in order to obtain a spontaneous facial expression, and is especially important since giving this instruction would clearly bias responses to the happy-sad item.)

After the exposure has been made, E waits fifteen seconds, then pulls the developed print from the developer compartment of the camera. During this time interval, E may speak with S to establish rapport. After fifteen seconds, E says to S:

> "Well look at that (pointing to print). That's a picture of you. That's a picture of (child's name). Isn't this a nice picture of (child's name). This is really you because you are (child's name) and there you are in the picture."

(E points to S's image in the photograph.)

To ascertain the effectiveness of the induction, E then asks S:

> "Can you tell me who that is in the picture?"

(E must obtain a response indicating that S knows that it is he in the photograph; either "That's me," or child states his own name or simply points to himself. If S does not recognize himself in the picture E repeats induction above. E must obtain a statement from S indicating that he recognizes himself in the picture before proceeding further.)

E seats S at a table suitable in height and size for a young child, and places the photograph on the table top, directly forward of S and beneath his head in about the same position as a dinner plate is usually placed. Since the recently developed print will tend to curl it will be useful to use two small pieces of tape at the top and bottom edges of the print, fastening it to the surface of the table. E should seat himself directly opposite S at the table and then say the following:

"Now I'd like to ask you a few questions about (child's name)." E then points to the picture, placing his own finger on it and proceeds to ask the set of questions in the context of the "self" referent. E must restate the introductory stem before asking each question and must point to the photograph each time he asks a question.

"Now can you tell me, is (child's name) happy or is he sad?" E proceeds through all items in the "self" referent in this manner. It is important that E explicitly point to the picture before asking each question, thereby repeatedly directing S's gaze and attention to it. It is also important to continually restate the question stem in the objective case: "Is (child's name)...happy or is he sad? This procedure establishes a set in which the child is induced to "stand back from himself," and to gain a perspective of himself as an "object" in the photograph. This should also assist S to assume the role of another toward himself.

After responding to all items on the "self" referent, the "mother" referent is introduced by E:

> "Now that was very good (child's first name). I'd like to ask you a few more questions. This time I'd like to ask you a few questions about (child's name) mother. Can you tell me...Does (child's name) mother think that (child's name) is happy or sad?"

E proceeds through the entire set of items in the "mother" referent context. Again, E must point to the photograph and repeat the appropriate stem before asking each question. The fourteen items asked under the "mother" referent are identical to those asked under all other referents. Only the referent itself is to be varied.

At this point, S will have completed two referent scales. The "self" referent scale, and in the case illustrated above, the "mother" referent.

Upon completion of the two referents, the examination is terminated. E should thank S warmly, present him with the photograph, and again reinforce the value of the picture by saying:

> "Well now, this picture is for you to keep, just as I promised. Here it is; remember you can do whatever you like with it; you can keep it for yourself or show it to your mother or teacher or whatever you like."

Name_____ Child's Code No._____

Center_____ Date_____

Class_____ Time of Day_____

Examiner_____

Scoring Sheet for Brown -- IDS Self-Concept Reference Test

Example of question format: 1. Is Johnny Gallagher happy or sad?
2. Does Johnny Gallagher's mother think Johnny Gallagher is happy or sad?

Item	Self Score*	Mother Score
1. Happy-sad	1, 0	1, 0
2. Clean-dirty	1, 0	1, 0
3. Good looking-ugly	1, 0	1, 0
4. Likes to play with other kids-doesn't like to play with other kids	1, 0	1, 0
5. Likes to have own things-likes to have other kids' things	1, 0	1, 0
6. Good-bad	1, 0	1, 0
7. Likes to talk a lot-doesn't like to talk a lot	1, 0	1, 0
8. Smart-stupid	1, 0	1, 0
9. Scared of a lot of things-not scared of a lot of things	0, 1	0, 1
10. Scared of a lot of people-not scared of a lot of people	0, 1	0, 1
11. Likes the way clothes look-doesn't like the way clothes look	1, 0	1, 0
12. Strong-weak	1, 0	1, 0
13. Healthy-sick	1, 0	1, 0
14. Likes the way his face looks- doesn't like the way his face looks	1, 0	1, 0

*Note: Score values parallel order in which adjectives are presented.

Hess-Shipman Toy Sort Task

Robert Hess
Virginia Shipman

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Hess-Shipman

Toy Sorting Task

Materials

Nine toys and a partitioned board are used for this task. The board is a circle 12 3/4" in diameter made of brown tempered masonite. The board is divided into three equal sections by white lines ( ).

The toys used are: (a) chairs--three small plastic chairs (dollhouse furniture); (b) spoons--three plastic picnic spoons; and (c) cars--three small metal toy cars. The toys are of three colors, with one toy of each type in each of the colors: (a) red; (b) blue; and (c) yellow.

Procedure

The two sorting methods are taught to the mother while the child is out of the room. The task begins with the board empty and the toys in random order on the table.

The E says, HERE ARE SOME TOYS. THERE ARE DIFFERENT WAYS THEY CAN BE PUT TOGETHER ON THE BOARD. E sorts by object, randomly varying the colors in each section. After sorting, E says, THESE GO TOGETHER BECAUSE THEY'RE ALL...(Pause), and points to each group to elicit the answer (spoons, chairs, cars).

E then says, THE TOYS CAN BE PUT TOGETHER IN ANOTHER WAY, TOO. E takes the toys off the board and sorts by color, with random placement within each section. E again says, THESE GO TOGETHER BECAUSE THEY'RE ALL... (pause), and points to each group to elicit the answer (red, yellow, blue).

After demonstrating both sorts, E says, I'D LIKE YOU TO TEACH_____ WHAT I HAVE SHOWN YOU--TO PUT THE TOYS TOGETHER IN THESE TWO WAYS.

I'LL BE OUTSIDE WHILE YOU TEACH HIM. AFTER YOU'RE SURE HE UNDERSTANDS HOW TO PUT THE TOYS TOGETHER IN THESE TWO WAYS, AND KNOWS WHY THE TOYS IN EACH GROUP BELONG TOGETHER, CALL ME BACK INTO THE ROOM. I'LL ASK HIM TO PUT THE TOYS ON THE BOARD IN THE TWO WAYS YOU HAVE TAUGHT HIM. . . AND TO DO IT WITHOUT ANY HELP FROM ME OR FROM YOU. TAKE AS MUCH TIME AS YOU NEED TO TEACH HIM. WHEN YOU'VE FINISHED, BE SURE TO CALL ME BACK INTO THE ROOM.

The E removes the toys from the board and then brings in the child and leaves the room. The mother is allowed complete freedom of method. The teaching task is terminated when the mother summons the examiner or at the end of forty minutes (from the time the E leaves the room), whichever occurs first.[1]

When E returns, the child is asked to repeat the sorts. E first takes the toys off the board and randomizes them. E then says, SHOW ME ONE OF THE WAYS TO PUT THE TOYS ON THE BOARD THAT YOUR MOTHER TAUGHT YOU. After the child sorts the toys, E says, THESE GO TOGETHER BECAUSE THEY'RE ALL . . . (pause), and points to each group to elicit the answers (spoons, chairs, cars; or red, yellow, blue).

Finally, E says, NOW SHOW ME THE OTHER WAY TO PUT THE TOYS ON THE BOARD THAT YOUR MOTHER TAUGHT YOU. After the child has sorted the toys, E says, THESE GO TOGETHER BECAUSE THEY'RE ALL . . . (pause), and points to each group to elicit the answers.

If the child does not correctly sort by color and by object on the first two sorts, a third trial is administered. Probing by the examiner is restricted to repetition and/or rephrasing of the questions and

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[1]This is a deviation from the Hess and Shipman procedure, which allowed unlimited time for the teaching session.

attempts to clarify the child's intent when it is unclear whether he has finished an intended sort or which toys are intended to be in particular groups. Probing continues until the examiner ascertains which toys are considered as members of a group and the total number of groups intended by the child. No attempt is made to stop prompting by the mother.[2]

The standard testing procedures must be followed for three trials. At the conclusion of the third trial, the examiner may prompt the child to enable him to complete the task correctly so the session is ended on a positive note for both the mother and the child.

Scoring

An immediate record is made of the child's performance on the post-task test.

Scoring

Points were awarded for post-teaching performance on the following basis:

Criterion	Score
1. Sorts correctly into 3 groups by object (cars, chairs, spoons)	0 or 1
2. Partially explains object sort (names one or two groups)	0 or 1
3. Fully explains object sort (names all 3 groups)	0 or 1
4. Sorts correctly into 3 groups by color (red, yellow, blue)	0 or 1
5. Partially explains color sort (names one or two groups)	0 or 1
6. Fully explains color sort (names all 3 groups)	0 or 1

In combination these scores yield a range from 0 (neither sort correctly formed) through 6 (both sorts correctly formed and fully explained). Subscores (sorting vs. verbalizing; object vs. color) may also be obtained. Points for verbalization were not awarded unless the child previously sorted correctly (exactly three groups, clearly differentiated). Points were credited whenever the child met criteria without help, including cases where the child corrected earlier errors

[2]This is a deviation from the Hess and Shipman procedure, which did not permit prompting by the mother except for support or encouragement.

on his second chance and also cases where the child first responded correctly but then became confused under continued questioning. Responses following probing by the tester were allowed to raise the child's score (when they involved passing an additional criterion) but not to lower it (since probing may have induced confusion or inhibition).

Probing by the tester was restricted to rephrasing of the questions and attempts to clarify the child's intent when it was unclear whether he had finished an intended sort or which toys were intended to be in particular groups. Probing continued (when necessary) until the tester ascertained both which toys were considered as members of a group and the total number of groups.

The entire session is audiotaped for subsequent further analysis. Anecdotal notes of the session are made by the examiner. Both the mother and the child are later rated from the tape with the adapted Hess-Shipman Mother-Child Interaction Procedure. Post-testing involved an equivalent form of this test, using colors orange, yellow and green; using airplanes, crayons and plastic men as objects.

Name_____

I.D. #_____

School_____

Date_____

POST TEST TEACHING PERFORMANCE ON TOY SORTING TASK

Criterion	Score
1. Sorts correctly into 3 groups by object (cars, chairs, spoons)	0 or 1
2. Partially explains object sort (names one or two groups)	0 or 1
3. Fully explains object sort (names all 3 groups)	0 or 1
4. Sorts correctly into 3 groups by color (red, yellow, blue)	0 or 1
5. Partially explains color sort (names one or two groups)	0 or 1
6. Fully explains color sort (names all 3 groups)	0 or 1

Child's Name_____ Tester_____
Child's ID _____ Coder _____
Date of Test_____

RATING SHEET FOR MOTHER-CHILD INTERACTION ON TOY SORTING TASK

General Orientation: ___yes ___no Number of Sentences_____

Future Statement Made:___yes ___no

Oriented to Sorting: ___yes ___no

Length of Time Spent in Orienting:_____secs.

Frequency of Orienting Statements:_____

Reference to Specific Attributes: (frequency count)

Red _____ Total_____

yellow_____ Total_____

blue _____ Total_____

cars _____ Total_____

chairs_____ Total_____

spoons_____ Total_____

Grand Total _____

TALLEY SHEET FOR ADDITIONAL MATERNAL MESSAGES

REINFORCEMENT
Verbal + Verbal -

Total_____ _____

EVALUATION
Verbal + Verbal -

Total _____ _____

COMMANDS
Physical Verbal

Total_____ _____

QUESTIONS
Physical Verbal

Total _____ _____

TALLY SHEET FOR CHILD FEEDBACK MESSAGES

VERBAL
Correct Incorrect

Total_____ _____

UNINTELLIGIBLE OR NO COMPLIANCE

Total_____

CHILD COOPERATION (circle)
1 2 3 4 5

MATERNAL AFFECTIONATENESS
1 2 3 4 5
range:_____to_____

DIRECTIONS FOR SCORING MOTHER-CHILD INTERACTION ON TOY SORTING TASK

MATERNAL MESSAGES

General Orientation: Any statements made by the mother prior to the beginning of the task that were not task oriented

EXAMPLE: "What have you been doing today?
"Come over here."

Number of Sentences: Tally the sentences of the general nature and sum.

Future statement made:

This variable measures the presence or absence of a general statement of what is to come. The mothers were coded for whether or not they gave a general overview of the task facing the child, using the present participle or future tense. The key consideration in coding this variable was the indication that events were to come in the future, regardless of the specific content with which the events were described.

Examples:

"We're going to play another game."
"Now I'm going to teach you something else."
"Sit down, I have something new to show you."

___yes ___no

Oriented to sorting:

Mothers were coded for presence or absence of introduction of the idea that blocks were sorted for specific reasons. The key consideration involved was whether or not the physical act of block placement was specifically and formally tied to the rationale.

Examples:

Present	Absent
"Why does that go there?"	"How are these the same?"
"These go together because..."	"These are all..."

___yes ___no

Length of time spent in orienting: _____ seconds

Frequency of orienting statements:

Tally all statements of this category and sum.

Reference to specific attributes: (frequency of occurrence)

red	_____	Total_____
yellow	_____	Total_____
blue	_____	Total_____
car	_____	Total_____
chair	_____	Total_____
spoon	_____	Total_____

Total specific attributes mentioned: (Grand Total of Above)_____

Verbal positive reinforcement: (Affirmative reply to feedback):

In this case the mother replies to the feedback received in the previous task-specific message with a statement of approval, confirmation or praise. Generally, only the first message following the feedback will be scored as a reply, succeeding statements being placed in the categories into which they would have been placed had there been no feedback.

A statement which is neither clearly positive nor negative should be scored by the predominant nature of the reply. A statement which is truly half positive and half negative which cannot be broken down should be scored as positive, such as "that's almost right."

When a mother follows a child's feedback with information which also affirms, the unit is rated as affirmative. Only the first such message following a reply will be rated as affirmative. However, a standard affirmative reply such as "yes" or "that's right" may be rated as affirmative in addition. For example:

Child: "That's a circle."
Mother: "A circle. Yes" = 2 positive
"That's right. Very good" = 2 evaluations

Verbal negative reinforcement: (Negative reply to feedback):

This is the reply in which the mother tells the child his response was incorrect. It may be a statement of fact or blame, or a critical statement. It is always task-specific. If the mother does not qualify the "no" with new information, the words accompanying the "no" are included in the message unit. For example, "NO, not that."

Verbal positive evaluation: general evaluation apart from feedback message.

Verbal negative evaluation: general evaluation apart from feedback messages.

Commands:

PHYSICAL:

Command messages are task-specific, and they take precedence over all others. Whether or not a message contains new information, if it contains a command that the child do something, it is rated as a command. A physical command is scored whenever the mother demands that the child do anything physical.

VERBAL:

Here the command is that the child respond verbally. This is distinguished from a question in that the child has no option in his reply. A statement beginning "Tell me..." is generally in this class. The content might range from a simple request for affirmation of understanding to requiring specifics about the placement of the blocks.

(Example: "Tell me what color that block is.")

Questions:

PHYSICAL:

This rating refers to the mother's requesting the child to do something physical ("Would you give me the blue car?" or "Can you show me a chair?").

VERBAL:

This is used when the child is requested to respond verbally. Again, this may range from a simple yes/no answer to a full explanation.

(Example: "Can you tell me where to put it?")

CHILD FEEDBACK MESSAGES

Correct verbal (verbal affirmative):

Here the child demonstrates that he understands the situation. Responses in this class are correct statements about the task. Again, the judgment of what is correct is made in terms of what the rater believes is an objectively correct answer to a question or command. All responses in this class are task-oriented.

When a correct verbal response accompanies a physical response, the physical response takes precedence. Therefore, responses rated as verbal are not generally accompanied by task-related physical action. Verbal responses which accompany behavior are, however, rated for the concepts they contain, although the feedback message is rated in the physical categories.

Incorrect verbal (verbal negative):

Here the verbal feedback is generally task-oriented in such a way that the child indicates he does not understand what is going on. It may be an incorrect response or an "I don't know." In any case, it tells the mother that there is something wrong with her communication. Cases in which the child does not respond to a question or command will not be rated in this class.

Unintelligible or no compliance:

This category is used when the child's feedback response cannot be understood, even if the mother opens the message unit with an understood message. If both the mother's and the child's statements are unintelligible, this category should also be used.

AFFECTIONATENESS

This rating concerns the mothers' general affective reactions to their children. The scale points are taken from the Affectionateness scale of the Fels Parent Behavior Rating Scales. Because most mothers are typically accepting of their children, raters note high and low extremes of affectionateness which appear during the interaction in addition to rating the mothers' typical behavior.

Rating Scale for Maternal Affectionateness

Rate the mothers' expression of affection to the child personally. Does she manifest a warm, personal affection, or a matter-of-fact, unemotional attitude, or definite antagonism?

Location: What is her most frequent behavior?

1. Passionate, consuming, intense, ardent, uncontrolled.

2. Affectionate, warm, fondling, loving, expressive, temperate, fond, attached, ind.

3. Objective, neutral, matter-of-fact, inhibited.

4. Cool, aloof, distant, forbidding, avoiding, annoyed, irritated, bothered.

5. Hostile, rejecting, disliking, blaming, icy.

Rating Scale for the Child's Cooperation

What was the most frequent character of the cooperation shown by the child during the task? Was he interested and attentive, or bored and restless, or resistant? Rate independently of the actions of the mother, considering only the child's behavior.

1. Child was fully tuned in to the mother -- pliable, interested, attentive. No difficulty or conflict arose.

2. Child maintained fairly consistent attention and cooperation, although some disinterest or restlessness was evident.

3. Child was periodically inattentive, but inattention was not prolonged, and there was no resistance to the mother or the task.

4. Child showed frequent and prolonged disinterest and inattention, and/or resistance to the mother or the task.

5. Child ignored the mother's teaching efforts and/or actively resisted the task throughout the interaction.

For these ratings, and for all the coding previously described, scores are assigned after resolving all disagreements by returning to the data. Thus, each separate code or rating was agreed upon immediately or after discussion.

Attitude Survey

Name_____

ATTITUDE SURVEY

SA	MA	MD	SD
strongly agree	mildly agree	mildly disagree	strongly disagree

Indicate your opinion by drawing a circle around the "SA" if you strongly agree, around the "MA" if you mildly agree, around the "MD" if you mildly disagree, and around the "SD" if you strongly disagree.

Below are a number of statements about various topics. They have been collected from many groups of people and state some of their opinions. There are no right or wrong answers; for every statement there are large numbers of people who agree and disagree. Please mark whether you agree or disagree on the following questions

SA MA MD SD 1. I think we will always have wars between countries no matter what we do to try to stop it.

SA MA MD SD 2. If you are a success you usually have more good breaks than bad breaks.

SA MA MD SD 3. Many times I feel that it does not do any real good to thank about what to do. You might just as well flip a coin.

SA MA MD SD 4. A man who gets a good job is just lucky to be at the right place at the right time.

SA MA MD SD 5. I don't understand why other people act the way toward me that they do.

SA MA MD SD 6. Much of what happens to me is probably a matter of chance and luck.

SA MA MD SD 7. I feel I have little influence over the way other people act.

SA MA MD SD 8. It is very hard to figure out what the future will be.

SA MA MD SD 9. The ordinary person has very little control over what the politician does in office.

SA MA MD SD 10. The things that happen to most people are outside their own control.

SA MA MD SD 11. It isn't wise to plan too far ahead because most things turn out to be a matter of good or bad fortune anyhow.

SA MA MD SD 12. I don't see how you can really tell how other people are going to act.

SA MA MD SD 13. When things are going well for me I usually think of it as a run of good luck.

SA MA MD SD 14. Most people don't realize how much their lives are influenced by things that happen just accidentally.

SA MA MD SD 15. I have usually found that what is going to happen will happen no matter what I do or think about it.

SA MA MD SD 16. Most of the things that have disappointed me in my life have come because my luck ran out.

SA MA MD SD 17. I don't really believe the saying that a person can be "the master of his fate."

SA MA MD SD 18. Success is mostly a matter of getting good breaks.

SA MA MD SD 19. What happens in the world seems to be beyond the control of most people.

SA MA MD SD 20. I feel that most people can't really be held responsible for themselves since no one has much choice about where he was born or raised.

SA MA MD SD 21. Many times the way people act has absolutely no reason behind it.

SA MA MD SD 22. Success in working with people depends much more on the way they feel than on what I do.

SA MA MD SD 23. Many times I feel that I have little influence over the things that happen to me.

SA MA MD SD 24. Sometimes I feel that I don't have enough control over the way my life is going.

SA MA MD SD 25. To get ahead you have to gamble on things that you are not sure of.

PLEASE SEE THAT YOU HAVE GIVEN YOUR OPINION FOR EACH QUESTION.

Educational Survey

NAME_____

I. YOUR OWN EDUCATION

1. Are you taking courses to further your education now?
   _____yes
   _____no

2. If you had it to do over again, knowing what you do now, would you have left school when you did?
   _____yes
   _____no

3. How far would you go in school now if you had it to do over again?
   _____finish elementary school
   _____attend some high school
   _____take some vocational work instead of finishing high school
   _____finish high school
   _____take some vocational or professional work after high school
   _____go to college
   _____finish college
   _____go to graduate school
   _____finish graduate school
   _____other (please specify)_____

II. YOUR CHILD'S EDUCATION

Answer the following questions about your child in the day care center, even if you have older children. If you have more than one child who attends the day care center regularly, answer the questions about your youngest child attending the center.

1. How old is your child (youngest child attending the day care center)?
   _____between 2½ and 3 years old
   _____between 3 and 3½ years old
   _____between 3½ and 4 years old
   _____between 4 and 4½ years old
   _____between 4½ and 5 years old
   _____between 5 and 5½ years old
   _____between 5½ and 6 years old

2. What is the sex of this child (your youngest child attending the day care center)
   _____male
   _____female

3. Compared to when you were very young, what kind of a chance do you think your child has to get a good education?
   _____a great deal worse
   _____a little worse
   _____the same
   _____a little better
   _____a great deal better

4. Compared to when you were very young, what kind of a chance do you think your child has to get a good job?

_____a great deal worse
_____a little worse
_____the same
_____a little better
_____a great deal better

5. How far in school would you <u>like</u> for your child to go?

_____finish elementary school
_____attend some high school
_____take some vocational work in high school
_____finish high school
_____take some vocational or professional work after high school
_____go to college
_____finish college
_____go to graduate school
_____finish graduate school
_____other (please specify)_____

6. Thinking about it, how far do you think your child probably <u>actually will</u> to in school?

_____finish elementary school
_____attend some high school
_____take some vocational work in high school
_____finish high school
_____take some vocational or professional work after high school
_____go to college
_____finish college
_____go to graduate school
_____finish graduate school
_____other (please specify)_____

7. If a child is not doing well at school, who do you think is usually at fault?

	Not at all	Some	Lots
School			
Teacher			
Child			
Parents			
Other (specify)			

8. Are there any particular things that you are doing with your child (youngest child attending the day care center) that you think may help him when he gets to school? (Please use other side if you need more room.)

PTT Evaluation Form

1. How many meetings did you attend? (there were 12 in all) _____

2. Number the things in order of importance that would have helped you attend meetings more frequently.

   _____ a. $5 per session

   _____ b. transportation to and from center

   _____ c. babysitting provided by center

   _____ d. nicer weather

   _____ e. other (please explain) _____

   _____

   _____

3. Number of lessons--

   ____ Just about right

   ____ Too few

   ____ Too many

4. What did you find most useful about the meetings?

   _____

   _____

   _____

5. What didn't you like about the meetings?

   _____

   _____

   _____

6. Was it difficult to work at home with your child on the lessons?

   yes _____ (why?) _____

   no _____ (why?) _____

7. Did your child enjoy and learn from your working with him/her?

   yes _____ (why?) _____

   no _____ (why?) _____

8. Did you enjoy learning and working on the lessons at home with your child?

yes _____(why?)_____

no _____(why?)_____

9. Would you attend another parent program at your day care center like this one?

yes _____(why?)_____

no _____(why?)_____

10. Do you feel you can talk with the teachers better now as a result of the sessions?

yes _____ no _____

11. Do you feel the games have helped you learn more about your child?

yes _____ no _____

12. Do you feel you can talk with your child better now than before the program?

yes _____ no _____

PTT Parent Information Form

PARENT'S NAME_____ CHILD'S ID_____

CHILD'S NAME_____ DAY CARE CENTER_____

ADDRESS_____

HOME PHONE_____

OFFICE PHONE_____

CHILD'S BIRTHDATE_____

CHILD'S ETHNIC GROUP_____

DATE CHILD STARTED AT CENTER_____ TERMINATED_____

AVERAGE NUMBER OF DAYS/WEEK ENROLLED_____ HOURS/DAY _____

Interview data - parent (mother) of child in day care center:

1) working now? employer_____
   yes_____
   no_____ describe job_____

   _____

   If yes,
   40 hours (or full time)_____
   between 21 and 39 hours (more than half time, less than full)_____
   20 hours (half time)_____
   less than 20 hours_____
   working variable hours that do not add up to half time at least_____

2) how far did mother go in school?
   eighth grade or less_____
   some high school_____
   finish high school_____
   some occupational or professional training beyond high school_____
   some college_____
   finish college_____
   beyond college_____

3) student now?
   yes_____
   no_____

   if yes,
   part-time_____
   full-time_____

4) marital status
   married_____
   divorced_____
   single, never married_____

5) husband's employment (answer also if husband not present, but another adult in house

employer_____

describe job_____

6) how far did husband (other adult in household) go in school?

eighth grade or less_____

some high school_____

finish high school_____

some occupational or professional training beyond high school_____

some college_____

finish college_____

beyond college_____

7) is husband (other adult) a student now?

yes_____

no_____

if yes,

part-time_____

full time_____

8) ADC_____ Not ADC_____ Any reduction in regular fees_____

9) list children in family (oldest to youngest)

name	sex	age	in attendance at Day Care

APPENDIX B

Parents Are Teachers Too Program

"PARENTS ARE TEACHERS TOO" PROGRAM

Judith L. Kuipers and Robert P. Boger

Michigan State University

The conceptualization of the PTT Program is built upon two primary bases. These are:

(1) enhancing the role of the mother as the primary teacher and socializer of her child; and
(2) encouraging the mother to recognize the critical nature of her relationship to her child in mediating the learning of the child both directly and indirectly.

There are three overall goals of the PTT Program. These are:

(1) to increase the vitality of the mother-child interaction (through lessons and activities the mother builds during the parent program session for her use with the child in the home).
(2) to increase the communication between the teaching staff and the mother (through the teacher's identification with the mother as a "teacher too" and the resultant home lesson development sessions).
(3) to increase the child's skills and abilities in the language and perceptual-motor content areas around which the lessons are built.

Finally, the specific objectives of the PTT Program are:

(1) to increase the amount and quality of mother-child interaction;
(2) to develop an attitude of teamwork between the day care center and the mother;
(3) to increase the self-confidence and skills of the mother in her nonroutine interaction with her child;
(4) to increase the mother's covert reinforcement of the preschool or day care program;
(5) to expedite the acquisition of linguistic and perceptual-motor skills by the child.

The parent's self-esteem and esteem for others is enhanced as the mother gains greater sense of control over her parenting role. Evidence from previous research indicates that the child develops a more positive view of himself and a more positive perception of his mother's attitude toward him as a result of participating in this program.

The program is based on the assumption that constructive positive inter- and intra-group attitudes cannot be conveyed to children when parents have little confidence in their own abilities. Therefore, lessons are designed to provide the parents with understandings and techniques that allow positive, successful interaction with their child.

This model is based on the assumption that children's affective as well as cognitive development is promoted optimally when they are presented interesting and challenging activities. These activities require the child to be actively involved with the game materials -- touching, manipulating, listening, seeing. They require that the child combine his sensory experiences and exercise his sensory memory to remember and label how things feel, look, and act.

The games in this program have been placed in an order roughly to match the development of children. This does not mean that there is a set order in which each child must go. Obviously, just as no two children look the same, neither are they all interested in the same types of activities at any one time. For these reasons, more than one activity is presented in each weekly lesson and suggestions for different ways to play each game are offered.

Materials are designed to be easily constructed, inexpensive, and of high appeal to children. We have found that the games are of special delight to the children because "mommy (or daddy) made it for me." Although materials are largely cardboard and were expected to have a short "life," parents have reported that after months of use the materials are still intact.

A developmental teaching model is the basic foundation for the program. The developmental approach emphasizes that much of the learning in early childhood is spontaneous and comes to the child in many ways. It is not necessarily sequential. It cannot always be carefully structured and ordered. This learning takes place long before language comes into existence and remains.

Physical movement and life experiences provide the first vocabulary for the child. Seeing, touching, tasting, smelling, and manipulating tell him what the world is like. The crucial modality of the young child is play behavior. To the child, play is essentially a research activity or an internal transactional process. It is free because the child's activity is still tentative and uncommitted. It is capable of exploration, revision, renunciation, and replacement. In play the child can manipulate objects, events, and even people with less restriction than that imposed on adults. Therefore, play provides not only a means for practicing, consolidating, and assimilating what one knows, but provides an opportunity to challenge or revise the knowledge.

All activity previously mentioned implies a thoughtfully prepared environment -- with space, freedom, and challenging materials to explore and experiment with. Further, it implies that parent and teacher understand how patterns of thought and commensurate language abilities develop in the young child. This is, of course, the basis for this specific developmental approach.

The core of the program consists of twelve PTT sessions adapted from twenty-two in the original combined focus. Day care professionals are trained to administer the parent program. The director or head teacher

from the day care center conducts the sessions for his/her participating parents. After emphasizing the primary role of the parent in the education of the child, the teacher works with mothers in constructing materials to be used by the mother and child in the home in educational games stressing language and perceptual skills. It is stressed that only the mother use the program lessons and materials during the time of the twelve workshop sessions. This is to protect the critical catalytic quality of the material on the resulting mother-child interaction. The "My mama made this for me" phenomenon is powerful. This reaction from the child has a powerful motivational effect on the mother and thus produces a dynamic and positive affective interaction.

APPENDIX C

Example of a PTT Lesson

PTT Lesson III

Flannelboards to Facilitate Language Development

General Objectives

To establish an atmosphere of learning together -- parent and teacher.

To extend parent's awareness of the importance of the early years by discussion of the developmental nature of intellectual and language growth in the preschool years.

To provide the parents with the general theory and philosophy of the developmental language approach.

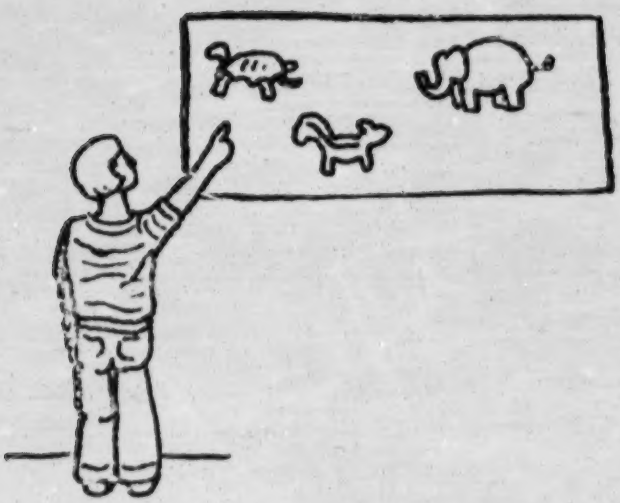
To provide parents with a variety of relevant skills which they can apply in teaching situations at home to enhance their child's developing discriminative skills and concept acquisition.

To provide parents with materials and techniques to teach the child color identification and ability to verbally express himself fully and accurately concerning color.

Specific Objectives

1. To explain the use of the flannelboard as a versatile educational tool for enriching the language of their children.
2. To assist mothers in construction of a flannelboard and materials to use with it.
3. Provide the mothers with exemplary demonstrations and guided opportunity to experiment with the materials.

4. To provide specific activities that develop
   a. Visual discrimination (Special Animal Games)
   b. Concepts of specific community places (Pretend Time) and people (Thinking Cap Games)
   c. Auditory sequencing (Story Cut-Out, Finger Plays, Songs)
   d. Auditory discrimination (Silly-Funnies Game)
5. To encourage mother to listen to child, pay particular attention to his questions, and build her activity from there.



Flannel Board Games And Stories

SPECIAL ANIMALS:

Present child with pellon, flannel, or felt cutouts of animals which are special in some way. The parent can ask the child to tell what makes that animal so special. After the child does this, ask him to tell you something about the animal. (e.g. size, shape, color, texture, etc.) Add to game with magazine pictures backed with flannel.

Elephant -- trunk, tusks, gray

Giraffe -- his long neck, legs

Zebra -- black and white striped

Skunk -- odor

PRETEND TIME:

The parent begins by telling the child a story something like this: "Jimmy, we will go on a trip together, see if you can guess where it is. We walk into a building, and we see shelves with canned food on them. Then we come to a table with lots of bananas, apples, pears. Vegetables are piled up there, too. Do you see meat piled up in the corner over there? What kind of a place do you suppose I was talking about?" (Grocery Store)

Gas Station -- tires, cans of oil, big pumps

Fire Station -- trucks, hoses, hats

Post Office -- letters, packages, mailmen

Shoe Store -- shoes, all kinds

Bakery -- rolls, pies, cakes, cookies

Library -- books and magazines

Reverse the game -- put a picture of the place on the flannel board, then ask the child to sort through the flannel cuts and put all the things that belong in that place on the board.

SILLY-FUNNIES:

Parent: "I'm going to tell you a funny story about you and your friends. Listen and see if you can tell me some "silly-funnies" in my story.

"Once upon a time three children came to school. Their names were Debbie, Tony, and Tom. They were all boys and they were 50 years old. Their teacher was a baby named Spot. Every day the children rode to school in a boat. When they got to school, they put on their pajamas and went to bed. When they woke up they had supper. Then they colored pictures on the ceiling and took them home. When school was over, a fire engine came to get them."

SHAPES, COLORS, SIZES:

Prepare different colored triangles, squares, circles, and rectangles that may also vary in size.

Work with your child very informally by having him make a "picture" with them calling his attention to color, shape and size.

THINKING CAP GAME

Using the policeman hat, the fireman hat, farmer hat, nurse hat, say to child, "Jimmy, here is Mr. Doodlepunk. Look at his hat. You tell Mommy about Mr. Doodlepunk. What kind of work does he do?"

Another day use the hats and flannel board to make up a story.

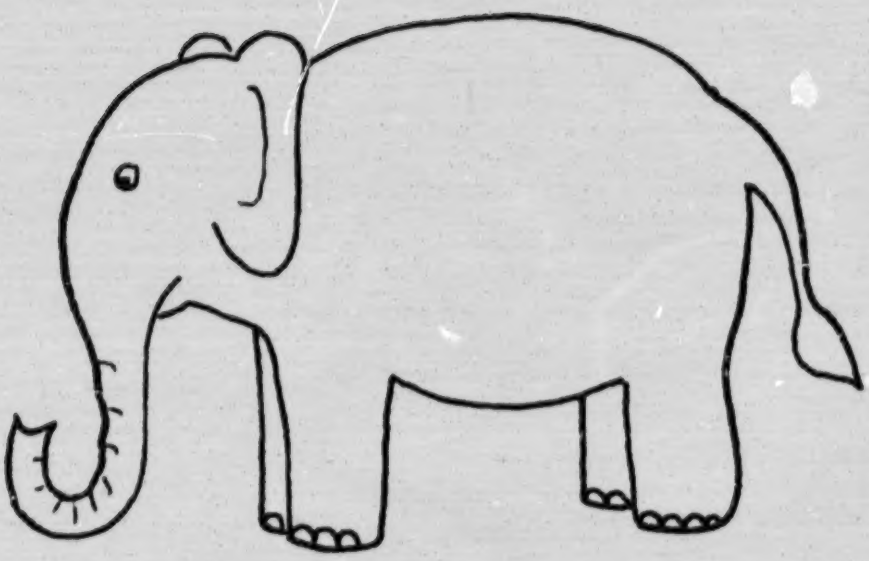
STORY CUT-OUT:

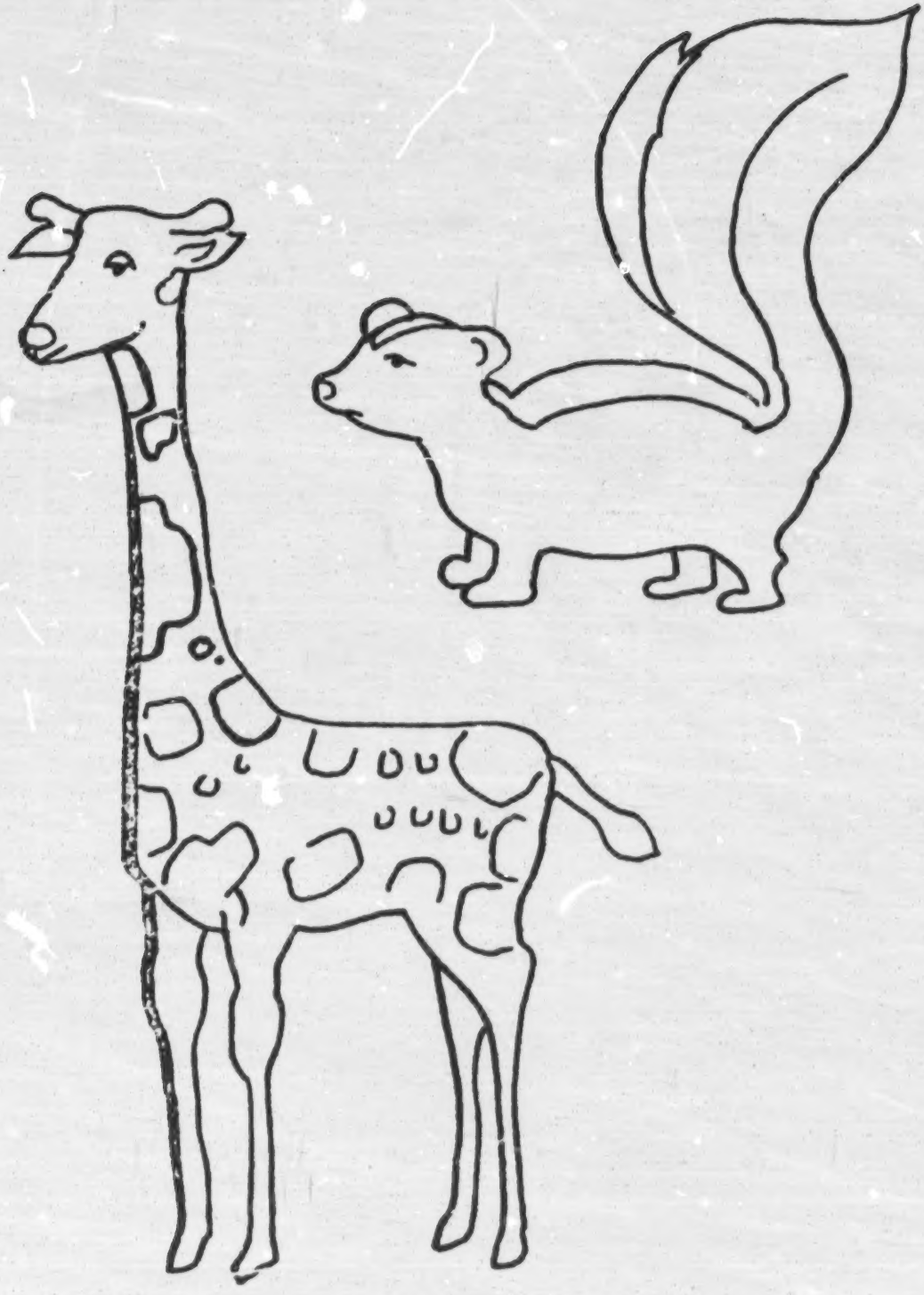
Use an inexpensive Golden Book of The Three Bears, or something similar to tell a story. Cut out pictures, back with flannel and use to tell story to the child. After he has heard it once or twice, have him tell it to you.

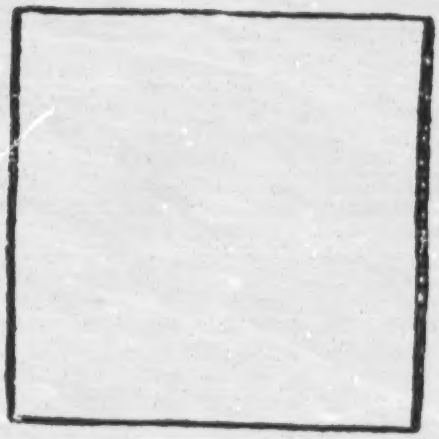
FIVE RED APPLES:

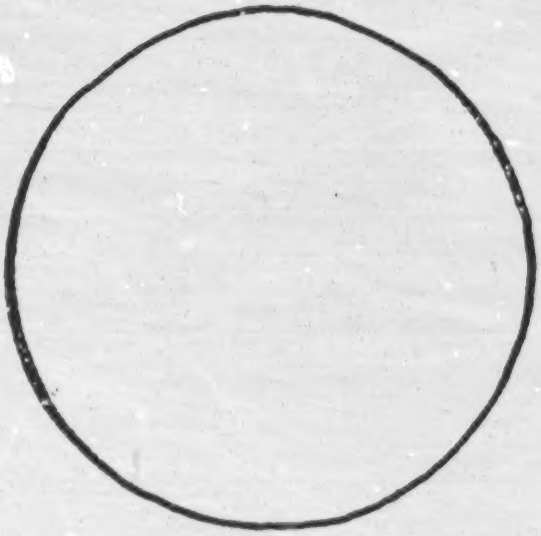
Five red apples in a basket by the door
Little Agnes took one and then there were ___?___
Four red apples were still enough for me
Ann picked one up and then there were ___?___
Three red apples and what did I do?
I baked one in a pie and then there were ___?___
Two red apples. Before this story's done
I'll make some juicy applesauce and that will leave ___?___
One red apple. I'll put it in a sack
I'll take it off to school and eat it for a snack.

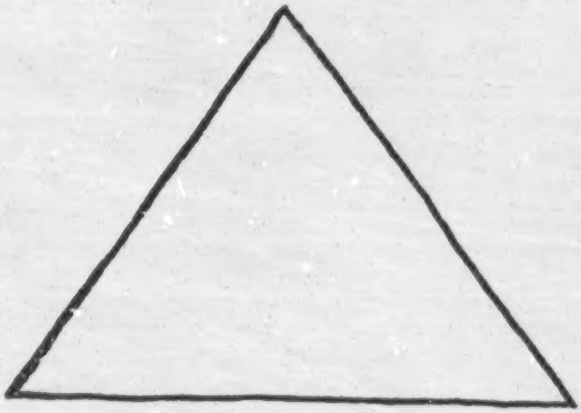
This story-poem can be demonstrated on a flannel board by using red flannel apple cutouts and pictures of the other story objects and characters. Parent can demonstrate while teaching the words to child.

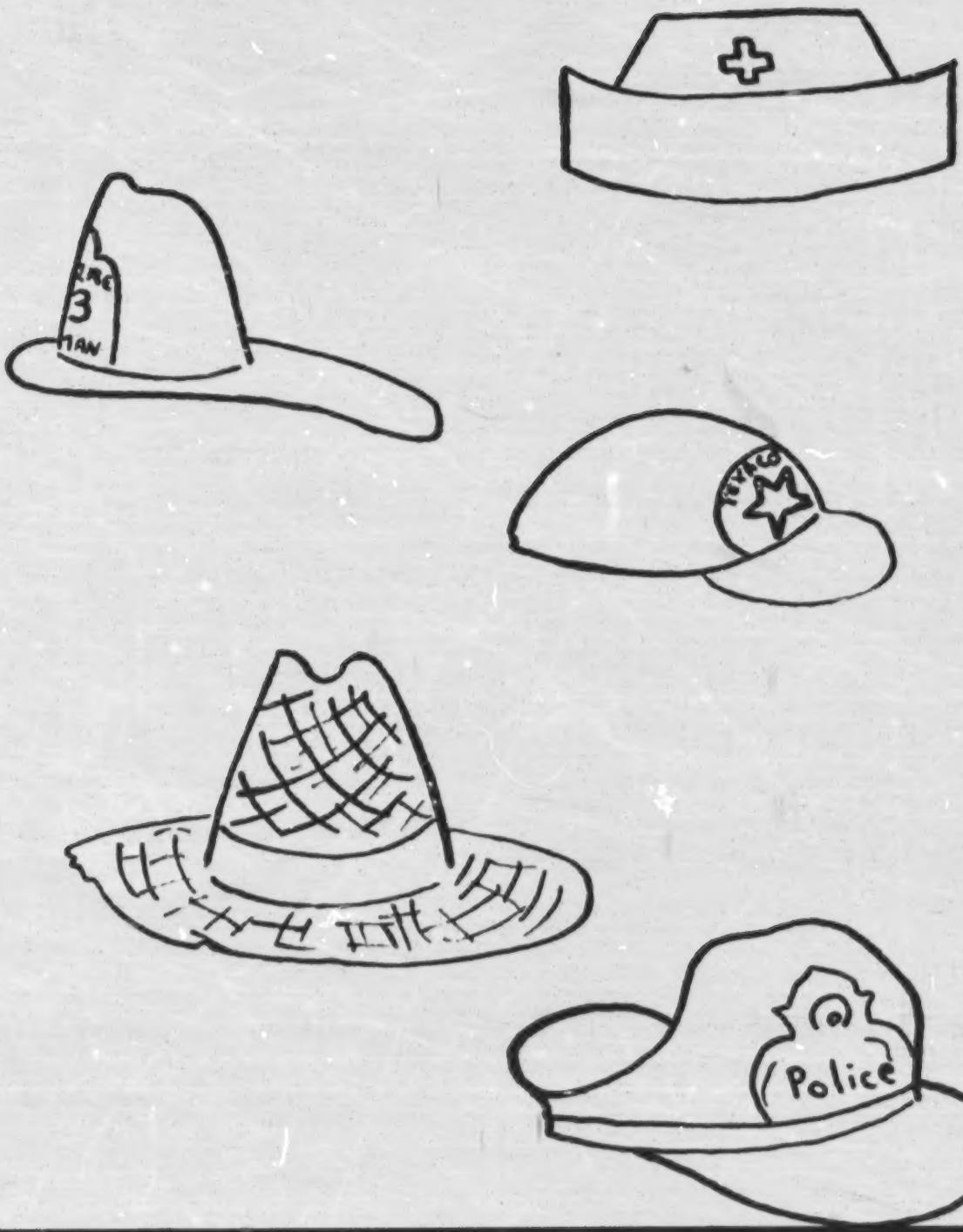








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MAN
Police

APPENDIX D

Day Care Center Descriptions

DAY CARE CENTER DESCRIPTIONS

Center 1

Center number 1 was a profit-making day care home with a licensed capacity of sixty. It was located in a house in a residential section of the city, rather close to the downtown area. The center utilized five rooms. The initial contact with the center was with its original director who had been connected with the center for four years. This director, a young Afro-American woman, planned to teach the PTT Program herself. Her position was terminated by the center owner for personal reasons one day before the PTT Program was to begin. She was replaced by a new white female director with a bachelor's degree in sociology; this director also replaced her as PTT teacher.

The staff/child ratio at the center was 1:8. The staff used the Peabody Language curriculum combined with free play activity. This center provided daily transportation for the children.

Previous parent programs were informal, such as conferences, parties, open house, and fund-raising events. Parent involvement was described as about 75 per cent - quite high. However, the change of staff at the inception of the PTT program was believed to have negatively influenced parental attendance in this study.

Center 2

Center number 2 was a non-profit center with a licensed capacity of thirty children. It was located on the fringe of a residential section of the city. The center occupied six rooms of a building connected to a church. A young white woman who lived in a neighboring suburb directed the center from its inception three years ago. She was the initial contact, and through her arrangements were made to

present the PTT Program. The director delegated the responsibility of teaching it to the young white head teacher. Due to parent controversy, the director left the employment of the center about two weeks before the program was to begin; she was replaced by an experienced woman who already operated another center in a nearby section of the city. The new director served as aide in the PTT Program. Both she and the PTT teacher had two-year associate degrees. The head teacher's degree was in police administration and she had previously worked on a police force. The head teacher - PTT teacher left the employment of the center shortly after the Program was completed. She was expecting her first child.

The staff/child ratio at the center was 1:5. The staff did not use a model curriculum. The center did not provide the children daily transportation.

Previous parent programs at Center 2 were described as involving a low level of parent participation.

Center 3

Center number 3 was a non-profit center with a licensed capacity of thirty-four children. It was located within the downtown area of a city. It occupied three classrooms and the dining area of a church. The director was a young white woman with a degree in social work; she also served as PTT teacher. The center had been in operation for three years, although the director began working at the center about half a year before the PTT Program started.

The staff/child ratio at the center was about 1:5. No specified curriculum model was employed by the teachers, although there was

cooperative staff curriculum planning. The center did not provide daily transportation to the children.

Previous parent involvement programs at the center had been informal: open house and a guidance program led by a psychologist. Previous level of participation in such programs was about 33 per cent.

Center 4

Center number 4 was a non-profit center with a licensed capacity of forty. It was located within the downtown area of the city. The center occupied two classrooms and the dining area of a church. It was directed by a young white woman with a degree in sociology and minors in recreation and psychology. The director was responsible for another center located several miles from center 4. The director served also as PTT teacher.

The staff/child ratio at the center was about 1:5. The teachers used no specified model curriculum, but the program director had a master's degree; she assisted the teachers in planning lessons. The center did not provide the children with transporation.

Previous parent involvement included: a parent board of directors, "pot luck" dinners, meetings with special speakers, a first aid course, open house and a bi-monthly newsletter. However, the director described attendance at previous functions as low.

Center 5

Center number 5 was a non-profit center with a licensed capacity of fifty children. The center was located in a church in a commercial area of the city. One large room was utilized, divided into six areas. The Afro-American woman who directed the center for the previous three

years also presented the PTT Program. Her academic background included a degree in education.

The staff/child ratio was 1:5. The teachers used no specific model curriculum. The center provided the children with daily transportation.

Previous parent involvement programs at the center included meetings with special speakers, workshops, open house, picnics and bake sales. Participation was described as having been low.

Center 6

Center number 6 was a non-profit center with a licensed capacity of fifty children. The center occupied two classrooms in a school in a residential area of the city. This center was one of several centers administrated through a central office. The young Afro-American woman serving as the head teacher for the past six years became the PTT teacher. She was concurrently completing a college degree in elementary education.

The staff/child ratio at the center was 1:7. The teachers utilized a model curriculum. While transportation was offered to all the centers served by the central administration, the majority of children at this center did not use the service.

Previous parent involvement focused mainly on monthly meetings of a parent board. Participation levels were reported as high.

APPENDIX E

Additional Results

Hess-Shipman Toy Sort Task
(Center differences)

Hess and Shipman Toy Sort

Variable number	Variable description
1	Future statements and orientation to sorting
2	Length of time spent orienting (seconds)
3	Frequency of orienting statements
4	Reference to specific attributes
5	Verbal positive reinforcement
6	Verbal negative reinforcement
7	Verbal positive evaluation
8	Verbal negative evaluation
9	Commands physical
10	Commands verbal
11	Questions physical
12	Questions verbal
13	Verbal correct (child)
14	Verbal incorrect (child)
15	Unintelligible or no compliance (child)
16	Child cooperation (typical)
17	Maternal affectionateness (typical)
18	Range of maternal affectionateness
19	Child's ability to object sort
20	Child's ability to color sort

20 Univariates contributing to multivariate center differences (p= .0143)

MANCOVA on Hess-Shipman Toy Sort on total families (N = 119)[1]

Variable	Univariate F	Level of Probability
1	1.7795	.1565
2	.4564	.7135
3	.2132	.8871
4	3.3936	.0212*
5	.9186	.4352
6	1.9935	.1204
7	1.6352	.1866
8	.5109	.6758
9	2.5278	.0622
10	2.3189	.0806
11	2.1241	.0001*
12	1.5826	.1989
13	1.6786	.1770
14	.6474	.5866
15	3.2939	.0240*
16	2.1517	.0991
17	.5515	.6485
18	5.5951	.0015*
19	1.1747	.3238
20	5.6644	.0014*

df = 3 and 93

[1]Refers to Table 4.12.

(1) INC 1, Center 1
(2) INC 1, Center 3
(3) INC 2 Center 6
(4) INC 2, Center 4
(5) INC 3 Center 5
(6) INC 3 Center 2

	Pre	Variable 4	Post		Pre	Variable 11	Post
1)	48.06		22.00	1)	2.94		3.82
2)	35.43		12.54	2)	4.82		3.50
3)	34.46		31.61538	3)	4.08		7.61538
4)	49.76		22.24	4)	6.33		4.52
5)	48.07		26.60	5)	4.07		7.33
6)	39.08		15.25	6)	2.33		1.58

	Pre	Variable 15	Post		Pre	Variable 18	Post
1)	1.53		.29	1)	.71		1.12
2)	.89		.82	2)	1.04		1.07
3)	.73		.73	3)	1.15		1.35
4)	2.67		1.33	4)	1.14		1.05
5)	3.40		.80	5)	1.40		1.27
6)	2.42		.33	6)	1.25		1.08

	Pre	Variable 20	Post
1)	1.53		1.29
2)	1.93		2.43
3)	1.96		1.80
4)	1.33		2.43
5)	1.27		1.87
6)	2.00		1.33

20 Univariates Contributing to Multivariate Center differences ($p < .0220$)

Hess Shipman

MANCOVA in Toy Sort on Total Families (excluding Center 1)

(N = 93)[1]

Variable	Univariate F	Level of Probability
1	2.6809	.0758
2	.0115	.9887
3	.0127	.9875
4	3.4194	.0385*
5	.6386	.5315
6	2.5169	.0883
7	2.2978	.1083
8	.1206	.8866
9	4.0764	.0213*
10	6.0261	.0039*
11	11.3806	.0001*
12	1.2171	.3025
13	1.8355	.1674
14	.1898	.8276
15	4.8207	.0111*
16	3.0838	.0523
17	.3021	.7403
18	6.7298	.0022*
19	1.9715	.1472
20	2.2212	.1163

df = 2 and 68

[1]Refers to Table 4.13.

(1) INC 1, Center 3
(2) INC 2, Center 6
(3) INC 2, Center 4
(4) INC 3, Center 5
(5) INC 3, Center 2

Pre	Variable 4	Post	Pre	Variable 9	Post
1) 34.36		12.96	1) 14.84		7.72
2) 38.45		34.41	2) 16.64		14.82
3) 51.40		22.85	3) 25.15		18.60
4) 48.07		26.60	4) 28.60		23.20
5) 41.64		15.27	5) 22.54545		9.73

Pre	Variable 10	Post	Pre	Variable 11	Post
1) .24		.52	1) 5.04		3.72
2) 1.14		.91	2) 4.68		7.95
3) .95		.30	3) 6.45		4.70
4) .47		2.07	4) 4.07		7.33
5) 1.09		0.00	5) 2.54545		1.45

Pre	Variable 15	Post	Pre	Variable 18	Post
1) .84		.88	1) 1.04		1.08
2) .86		.73	2) 1.18		1.32
3) 2.80		1.40	3) 1.15		1.05
4) 3.40		.80	4) 1.40		1.27
5) 2.64		.36	5) 1.27		1.09

20 Univariates contributing to multivariate

center differences (p= .0289

3-Way MANCOVA on Hase-Shipman Toy Sort

(N = 105)[1]

Variable	Univariate F	Level of Probability
1	1.1464	.3363
2	.8807	.4553
3	.7321	.5362
4	3.3121	.0247*
5	.4833	.6949
6	3.0563	.0337*
7	2.0242	.1180
8	.5967	.6193
9	2.6898	.0526
10	5.0708	.0031*
11	7.8700	.0002*
12	.9689	.4122
13	1.3744	.2574
14	.3580	.7835
15	3.3686	.0231*
16	2.4138	.0735
17	.7649	.5174
18	4.7964	.0042*
19	1.1499	.3349
20	3.5264	.0191*

df = 3 and 73

[1] Refers to Table 4.14.

(1) INC 1, 0 attend Center 1
(2) INC 1, 0 attend Center 3
(3) INC 1 1-12 attend Center 1
(4) INC 1 1-12 attend Center 3
(5) INC 2 0 attend Center 6
(6) INC 2, 0 attend, Center 4
(7) INC 2, 1-12 attend Center 6
(8) INC 2, 1-12 attend, Center 4
(9) INC 3, 0 attend, Center 5
(10) INC 3, 0 attend, Center 2
(11) INC 3, 1-12 attend Center 5
(12) INC 3, 1-12 attend, Center 2

	Pre	Variable 4	Post		Pre	Variable 6	Post
1)	19.80		11.80	1)	1.00		.20
2)	17.83		9.17	2)	2.17		2.67
3)	67.57		28.29	3)	3.00		2.57
4)	39.58		14.16	4)	4.26		1.68
5)	87.67		58.00	5)	6.00		10.67
6)	23.14		24.86	6)	7.71		2.14
7)	30.68		30.68	7)	4.32		2.37
8)	66.61538		21.77	8)	3.92		.69
9)	34.55556		24.89	9)	4.44		3.33
10)	23.37500		8.75	10)	2.62500		1.50
11)	68.33		29.17	11)	9.17		1.17
12)	90.33		32.67	12)	8.33		2.67

	Pre	Variable 10	Post		Pre	Variable 11	Post
1)	2.40		.20	1)	0.00		2.40
2)	0.00		1.00	2)	4.83		1.67
3)	.24		.86	3)	5.86		4.86
4)	.32		.37	4)	5.10526		4.37
5)	.33		1.67	5)	4.33		10.00
6)	1.43		.14	6)	4.43		5.14
7)	1.26		.79	7)	4.74		7.63
8)	.61		.38	8)	7.53		4.46
9)	.55556		1.89	9)	3.33		5.11
10)	.62500		0.00	10)	1.50		1.25
11)	.33		2.33	11)	5.17		10.67
12)	2.33		0.00	12)	5.33		2.00

Pre	Variable 15	Post	Pre	Variable 18	Post
1) 0.00		0.00	1) .60		1.00
2) .67		.67	2) 1.00		1.00
3) 3.14		.43	3) .71		1.00
4) .89		.95	4) 1.05		1.10526
5) 1.67		.67	5) 1.67		1.33
6) 2.43		1.00	6) 1.00		2.14
7) .74		.74	7) 1.10526		1.32
8) 3.00		1.62	8) 1.23		1.00
9) 3.44		.78	9) 1.22		1.11
10) 2.50		.25	10) 1.25		1.00
11) 3.33		.83	11) 1.67		1.50
12) 3.00		.67	12) 1.33		1.33

Pre	Variable 20	Post
1) 2.20		2.00
2) 2.67		2.50
3) 1.14		1.00
4) 1.53		2.43
5) 1.33		1.00
6) 1.00		2.43
7) 2.00		1.84
8) 1.38		2.38
9) 1.44		1.89
10) 1.75		1.37500
11) 1.00		1.83
12) 2.33		.67

20 Univariates contributing to multivariate
Center differences ($p < .0064$)

3-Way MANCOVA on Hase-Shipman Toy Sort
(excluding center 1) N=93[1]

Variable	Univariate F	Level of Probability
1	2.6407	.0792
2	.0656	.9366
3	.0715	.9311
4	4.3950	.0164*
5	.5059	.6055
6	5.4327	.0067*
7	2.1492	.1251
8	.3370	.7152
9	4.0153	.0229*
10	5.4136	.0068*
11	9.9801	.0002*
12	1.4220	.2489
13	1.5984	.2104
14	.1988	.8203
15	5.0854	.0090*
16	3.2413	.0458*
17	.3388	.7140
18	5.8147	.0049*
19	2.2151	.1176
20	2.4878	.0913

df= 2 and 83

*significant at $p < .05$

[1]Refers to Table 4.15

1) Inc 1; 0 attend, Center 3
2) Inc 1; 1-12 attend, Center 3
3) Inc 2; 0 attend, Center 6
4) Inc 2; 0 attend, Center 4
5) Inc 2; 1-12 attend, Center 6
6) Inc 2; 1-12 attend, Center 4
7) Inc 3; 0 attend, Center 5
8) Inc 3; 0 attend, Center 2
9) Inc 3; 1-12 attend, Center 5
10) Inc 3; 1-12 attend, Center 2

(pre) Variable 4	Post	(pre) Variable 6	Post
1) 17.83	9.17	1) 2.17	2.67
2) 39.58	14.16	2) 4.26	1.68
3) 87.67	58.00	3) 6.00	10.67
4) 23.14	24.86	4) 7.71	2.14
5) 30.68	30.68	5) 4.31	2.37
6) 66.61	21.77	6) 3.92	.69
7) 34.55	24.89	7) 4.44	3.33
8) 23.37	8.75	8) 2.62	1.50
9) 68.33	29.17	9) 9.17	1.17
10) 90.33	32.67	10) 8.33	2.67

Pre Variable 9	Post	Pre Variable 10	Post
1) 11.83	7.33	1) 0.00	1.00
2) 15.79	7.84	2) .31	.37
3) 21.67	15.67	3) .33	1.67
4) 31.71	22.00	4) 1.43	.14
5) 15.84	14.68	5) 1.26	.79
6) 21.61	16.77	6) .69	.38
7) 20.55	17.89	7) .55	1.89
8) 17.87	10.12	8) .62	0.00
9) 40.67	31.17	9) .33	2.33
10) 35.00	8.67	10) 2.33	0.00

Pre	Variable 11	Post
1)	4.83	1.67
2)	5.10	4.37
3)	4.33	10.00
4)	4.33	5.14
5)	4.74	7.63
6)	7.54	4.46
7)	3.33	5.11
8)	1.50	1.25
9)	5.17	10.67
10)	5.33	2.00

Pre	Variable 15	Post
1)	.67	.67
2)	.89	.67
3)	1.67	1.00
4)	2.42	1.00
5)	.74	.74
6)	3.00	1.61
7)	3.44	.78
8)	2.50	.25
9)	3.33	.83
10)	3.00	.67

Pre	Variable 16	Post
1)	1.33	1.17
2)	1.47	1.21
3)	2.00	2.33
4)	1.28	1.28
5)	1.53	1.31
6)	1.54	1.23
7)	1.67	1.89
8)	1.75	1.12
9)	2.00	1.33
10)	2.67	2.00

Pre	Variable 18	Post
1)	1.00	1.00
2)	1.05	1.10
3)	1.67	1.33
4)	1.00	1.14
5)	1.10	1.31
6)	1.23	1.00
7)	1.22	1.11
8)	1.25	1.00
9)	1.67	1.50
10)	1.33	1.33